# Index

**OVERVIEW**

Body Control System Description and Operation ..... A-1
Power Mode Description and Operation ..... A-1
Retained Accessory Power Description and Operation ..... A-3

**BACKUP ALARM/CAMERA**

Backup Alarm Relay Schematic ..... A-5
Backup Lamp Schematic ..... A-6
Chassis Harness Routing Diagram ..... A-7
Junction Block - Rear Lamps ..... A-8
Junction Block - Rear Lamps X1 ..... A-9
Junction Block - Rear Lamps X2 ..... A-10

**BATTERY ISOLATOR**

Medium Duty Battery Isolator Schematic ..... A-11
Auxiliary Battery Schematic ..... A-12

**BATTERY/IGNITION GROUND FEEDS**

Installation of Electrical Aftermarket Accessories-Battery, Ignition and Ground Feeds ..... A-13

**ELECTRICAL CHARGING SYSTEM DESCRIPTION AND OPERATION** ..... A-18

**ENGINE IDLE UP**

Elevated Idle / PTO / High Idle Are All Different Options ..... A-23
Adding PTO Option To A Vehicle Without (PTO) ..... A-24

**IMMOBILIZER** ..... A-25

**LIGHTING**

Forward

Components ..... A-27
Harness Routing ..... A-30

Headlamp Connector Views ..... A-34
Headlamp Replacement ..... A-42
Bulb Replacement ..... A-45
Rearward
Separate Stop/Turn ..... A-48
CHMSL ..... A-51
Dome Lamp ..... A-52
Snow Plow (VYU) ..... A-53
Roof Beacon (TRW) ..... A-56

**PARK NEUTRAL** ..... A-61

**REMOTE START/STOP** ..... A-63

**TRAILER BRAKE**
Description and Operation ..... A-64
Trailer Brake Control Schematics ..... A-68
Trailer Connector Schematics ..... A-69
Rear Frame and Underbody Components ..... A-71
Aftermarket Procedure ..... A-79

**FUSE BLOCK DETAIL**

Fuse Block - Underhood Label ..... B-1
Fuse Block - Underhood Top View - Diesel ..... B-11
Fuse Block - Underhood Top View - Gas ..... B-12
Fuse Block - Underhood Bottom View ..... B-13
Fuse Block - Underhood X1 ..... B-14
Fuse Block - Underhood X2 ..... B-16
Fuse Block - Underhood X3 ..... B-19
Fuse Block - Underhood X4 ..... B-21
Fuse Block - Underhood X5 ..... B-23
Fuse Block - Underhood X6 ..... B-25
Fuse Block - Underhood X7 (except TP2) ..... B-25
Fuse Block - Underhood X7 (TP2) ..... B-25
Fuse Block - Underhood X8 (except JL1) ..... B-25
Fuse Block - Underhood X8 (JL1) ..... B-25
Fuse Block - I/P Label ..... B-26
Fuse Block - I/P Top View ..... B-28
Fuse Block - I/P Bottom View ..... B-29
Fuse Block - I/P X1 ..... B-30
Fuse Block - I/P X2 (except MEX) ..... B-32
Fuse Block - I/P X3 ..... B-33
Fuse Block - I/P X4 ..... B-34
Fuse Block - Auxiliary (HP2) Label ..... B-36
Fuse Block - Auxiliary (HP2) Top View ..... B-37
Fuse Block - Auxiliary (HP2) Bottom View ..... B-38
Fuse Block - Auxiliary X1 (HP2) ..... B-39
Fuse Block - Auxiliary X2 (HP2) ..... B-41
Fuse Block - Auxiliary X3 (HP2) ..... B-42

Fuse Block - Auxiliary X4 (HP2) ..... B-42
Fuse Block - Auxiliary Fuse Holder (HP2) ..... B-42
Fuse Block - Mobile Radio Device Usage (9L4) ..... B-43
Fuse Block - Mobile Radio Top View (9L4) ..... B-43
Fuse Block - Mobile Radio (9L4) ..... B-44
Fuse Holder, Device Usage (Gas) ..... B-45
Fuse Holder, Device Usage (Diesel) ..... B-45
Fuse Holder X1 (Gas except 9L4) ..... B-46
Fuse Holder X1 (Diesel or Gas with 9L4) ..... B-46
Fuse Holder X2 (Gas with TP2) ..... B-46
Fuse Holder X2 (Diesel or Gas except LU3) ..... B-46
Fuse Holder X2 (LU3) ..... B-46
Fuse Holder X2 (Gas except LU3) ..... B-46
Fuse Holder X2 (Diesel) ..... B-47
Fuse Holder X3 (9L4) ..... B-47
Fuse Holder X3 (Diesel) ..... B-47
Fuse Holder X4 (TP2) ..... B-47
Fuse Holder X4 (Diesel) ..... B-47
Fuse Holder X4 (Diesel with K76 or YF2) ..... B-47

**JUNCTION BLOCK DETAIL**

Junction Block - Left I/P, Label ..... B-48
Junction Block - Left I/P, Top View ..... B-49
Junction Block - Left I/P, Bottom View ..... B-50
Junction Block - Left I/P X1 (except MEX) ..... B-51
Junction Block - Left I/P X2 (except MEX) ..... B-53
Junction Block - Left I/P X3 (except MEX) ..... B-55
Junction Block - Left I/P X4 (except MEX) ..... B-56

Junction Block - Left I/P X5 (SPO Alarm or SPO Heated Seats) ..... B-57
Junction Block - Left I/P X7 (JF4) ..... B-58
Junction Block - Left I/P X8 (except MEX) ..... B-59
Junction Block - Left I/P X9 (except MEX) ..... B-60
Junction Block - Left I/P X10 (except MEX) ..... B-61
Junction Block - Left I/P X11 (except MEX) ..... B-62
Junction Block - Left I/P X12 (except MEX) ..... B-63
Junction Block - Left I/P X13 (AN3) ..... B-64
Junction Block - Left I/P X14 (5Y0, 5X7, 9L4 or SPO Heated Seats) ..... B-65
Junction Block - Right I/P, Top View ..... B-66
Junction Block - Right I/P (Wire Entry) ..... B-67
Junction Block - Right I/P X2 ..... B-70
Junction Block - Right I/P X3 ..... B-71
Junction Block - Right I/P X4 ..... B-72
Junction Block - Right I/P X5 ..... B-73
Junction Block - Right I/P X6 ..... B-74
Junction Block - Rear Lamps ..... B-75
Junction Block - Rear Lamps X1 ..... B-76
Junction Block - Rear Lamps X2 ..... B-77
Junction Block - Rear Lamps X3 ..... B-78
Junction Block - Rear Lamps X4 ..... B-79

**BODY CONTROL MODULE (BCM)**

Body Control Module (BCM) X1 ..... C-1
Blower Motor Control Module (BCM) X2 ..... C-2
Body Control Module (BCM) X2 ..... C-3
Body Control Module (BCM) X3 ..... C-4
Body Control Module (BCM) X4 ..... C-5
Body Control Module (BCM) X5 ..... C-6
Body Control Module (BCM) X6 ..... C-7
Body Control Module (BCM) X7 (except MEX or A52) ..... C-8

**DOOR INLINE HARNESS CONNECTOR END VIEWS**

**TRUCK**

X500 Left Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3) ..... C-10
X502 Left Front Door Harness to Body Harness (ASF with AN3 or DL3, and except YE9) ..... C-12
X501 Left Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3) ..... C-13
X600 Right Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3 ..... C-15
X601 Right Front Door Harness to Body Harness (ASF) ..... C-17
X700 Body Harness to Left Rear Door Harness (Crew Cab) ..... C-18
X700 Left Rear Door Harness to Body Harness (Extended Cab) ..... C-20
X800 Body Harness to Right Rear Door Harness (Crew Cab) ..... C-22
X800 Right Rear Door Harness to Body Harness (Extended Cab) ..... C-24

**SUV**

X500 Driver Door Harness to Body Harness (ASF) ..... C-26
X600 Passenger Door Harness to Body Harness (ASF) ..... C-27
X700 Body Harness to Left Rear Door Harness ..... C-28
X800 Body Harness to Right Rear Door Harness ..... C-30

**ENGINE CONTROL MODULE (ECM)**

Engine Control Module (ECM) X1 (Diesel) ..... C-32
Engine Control Module (ECM) X1 (HP2) ..... C-34

Engine Control Module (ECM) X1 (L96) ..... C-35
Engine Control Module (ECM) X1 (LU3) ..... C-37
Engine Control Module (ECM) X1 (LY2, LMG, LC9, LY5, LH6, L76 or L9H) ..... C-39
Engine Control Module (ECM) X1 (LY6) ..... C-41
Engine Control Module (ECM) X2 (Diesel) ..... C-43
Engine Control Module (ECM) X2 (HP2) ..... C-45
Engine Control Module (ECM) X2 (L96) ..... C-47
Engine Control Module (ECM) X2 (LMG, LC9, LY5, LH6, L76, or L9H without Y91) ..... C-49
Engine Control Module (ECM) X2 (LU3) ..... C-51
Engine Control Module (ECM) X2 (LY2, LY6, or L9H with Y91) ..... C-53
Engine Control Module (ECM) X3 (Diesel) ..... C-55
Engine Control Module (ECM) X3 (HP2) ..... C-57
Engine Control Module (ECM) X3 (L96) ..... C-59

**TRANSMISSION CONTROL MODULE (TCM)**

Transmission Control Module (TCM) (M30) ..... C-60
Transmission Control Module (TCM) (MW7) ..... C-62

**RADIO**

Radio X1 (except Y91) ..... C-64
Radio X1 (Y91 or 8S8) ..... C-65
Radio X2 (except Y91 or 8S8) ..... C-66
Radio X2 (Y91 or 8S8) ..... C-67
Radio X3 (U42) ..... C-68
Radio X4 (UUL or UUK) ..... C-69

# Overview

## BODY CONTROL SYSTEM DESCRIPTION AND OPERATION

The body control system consists of the body control module (BCM), communications, and various input and outputs. Some inputs, outputs and messages require other modules to interact with the BCM. The BCM also has discrete input and output terminals to control the vehicle's body functions. The BCM is wired to the GMLAN high speed serial data buss and the GMLAN low speed serial data buss and acts as a gateway between them. If the BCM does not communicate the vehicle will not start due to the inability of the engine control module (ECM)/ powertrain control module (PCM) and theft deterrent module (TDM) to communicate without the BCM providing the gateway function.

## POWER MODE DESCRIPTION AND OPERATION

### Serial Data Power Mode Master

Power to many of this vehicles circuits is controlled by the module that is designated the power mode master (PMM). This vehicles PMM is the body control module (BCM). The ignition switch is a low current switch with multiple discrete ignition switch signals to the PMM for determination of the power mode that will be sent over the serial data circuits to the other modules that need this information. The PMM will also activate relays and other direct outputs of the PMM as needed. The PMM determines which power mode (Off, Accessory, Run, Crank Request) is required, and reports this information to other modules via serial data. Modules which have switched voltage inputs may operate in a default mode if the PMM serial data message does not match what the individual module can see from its own connections.

The PMM receives ignition switch signals to identify the operators desired power mode. The PMM Power Mode Parameters table below illustrates the correct state of these input parameters (circuits) in correspondence to the ignition switch position:

### PMM Power Mode Parameters

| Ignition Switch Position | Power Mode Transmitted | Ign. Off / Run / Crank (Run Crank Ignition 1 Voltage Circuit) | Ignition Accessory / Run (Accessory Voltage Circuit) | Ignition Run/Crank (Ignition 1 Voltage Circuit) |
|---|---|---|---|---|
| Off Key Out | Off | Key Out/ACC | Inactive | Inactive |
| Off Key IN | Off | Key In/Off | Inactive | Inactive |
| Accessory | Accessory | Key Out/ACC | Active | Inactive |
| Run | Run | Run | Active | Active |
| Start | Crank Request | Crank | Inactive | Active |



*(continued on next page)*

## Overview (cont'd)

### Relay Controlled Power Mode

The body control module (BCM) uses the discrete ignition switch inputs Run/Crank Ignition 1 Voltage, Accessory Voltage, and Ignition 1 Voltage, to distinguish the correct power mode. The BCM, after determining the desired power mode, will activate the appropriate relays for that power mode.

The RAP relay remains on for a timed period after the Ignition key is removed. Refer to Retained Accessory Power Description and Operation for more information on the retained accessory power (RAP) function.

### BCM Awake/Sleep States

The body control module (BCM) is able to control or perform all of the BCM functions in the awake state. The BCM enters the sleep state when active control or normal monitoring of system functions has stopped and a time limit has passed. The BCM must detect certain wake-up inputs before entering the awake state. The BCM monitors for these inputs during the sleep state.

The BCM will enter the awake state if any of the following wake-up inputs are detected:

- Activity on the serial data line
- Detection of a battery reconnect
- Any door open signal
- Headlamps ON
- Key-in-ignition
- Ignition ON
- Park lamps ON
- Keyless entry or remote start message

The BCM will enter a sleep state when all of the following conditions exist:

- The ignition switch is OFF, key out.
- No activity exists on the serial data line.
- No outputs are commanded.
- No delay timers are actively counting.
- No wake-up inputs are present.

If all these conditions are met, the BCM will enter a low power or sleep condition.



*(continued on next page)*

## Overview (cont'd)

### RETAINED ACCESSORY POWER DESCRIPTION AND OPERATION

### Retained Accessory Power (RAP)

The retained accessory power (RAP) system allows specific vehicle functions to operate for a specific amount of time after the ignition switch is turned OFF. The BCM monitors the ignition switch position, battery condition, and each door open/closed status to determine whether RAP should be initiated or terminated. RAP is controlled with 2 different methods; serial data and relay control. The relay is internal to the BCM and feeds multiple external components. Some modules receive a RAP message over the serial data circuits. Serial data controlled RAP is deactivated as required by their modules RAP power mode operation. Other subsystems are activated directly by the BCM through the internal RAP relay. Components and systems that are active in RAP are also activated anytime the ignition is any position other than OFF regardless of the door switch signals.

The BCM sends a serial data power mode message ending the RAP function when one of the following conditions are met:

- The BCM receives an input indicating the opening of any passenger compartment door after the ignition key is out of the ignition.

  Important: The only door that will turn off the radio during RAP is the driver door. This is a function of the radio and will still turn off after the time limit.
- The BCM internal timer for RAP expires after approximately 10 minutes.

The BCM detects a decrease in battery voltage below a calibrated limit.

### Relay Control of Retained Accessory Power (RAP)

The body control module (BCM) keeps the internal RAP relay energized during all power modes, except Off-Awake and Crank. The relay is also energized for approximately 10 minutes after shutting the ignition OFF and removing the key, providing no door is opened. The BCM will de-energize the internal RAP relay at the same time the serial data message is sent to end RAP. When the internal RAP relay is energized voltage is applied on the accessory voltage circuit at BCM harness connector X2 terminal 22.

The devices powered by the internal RAP relay during the RAP power mode are as follows:

- Sunroof module - (CF5)
- Mobile radio fuse block, relay A - (9L4)
- Sliding rear window switch - (A48)
- Window switches, driver and passenger - (A31 w/o AN3)



*(continued on next page)*

## Overview (cont'd)

**Serial Data Control of Retained Accessory Power (RAP)**

RAP systems controlled by serial data are as follows:

**Power Windows**

If equipped with RPO AN3 the front window switches are separate modules that operate the windows on their respective side of the vehicle and receive the serial data RAP messages. Window RAP activation/termination timing is the same as relay operation.

**Vehicle Communication Interface Module (VCIM) (Onstar®)**

VCIM RAP activation/termination is the same as radio operation with 1 exception; if there is an active call when the ignition key is turned off the VCIM will remain in RAP mode and keep the radio in RAP mode until the call is terminated.

**Radio**

Radio RAP activation/termination is the same as relay operation with 1 exception; the only door switch that will turn off the radio during RAP is the driver door open switch.

## Backup Alarm/Camera - Backup Alarm Relay Schematic

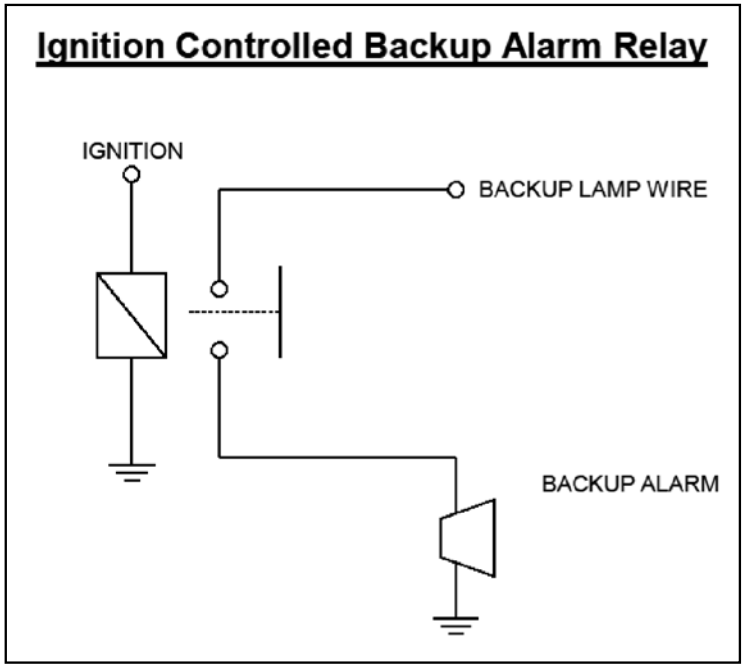
For installation of backup alarm/camera on vehicles without option code 8S3 [Factory backup alarm], connection can be made at the rear lighting connector X1 or X2.

The backup lamps come on with perimeter lighting and key fob acknowledgement, to avoid operation upon entry and exit from the vehicle there are two options...

1. Have the dealer load the SFW [backup alarm calibration] software in your body computer. This calibration disables the perimeter lighting feature and will eliminate the activation of the back-up alarm when exiting and/or key fob activation. Note there is a fee for the dealers to perform this service. The back-up alarm can then be wired directly to the back-up lamp circuit directly and will operate (alarm sounded) when the vehicle is in reverse and the back-up lamps are illuminated.

OR

2. Add an ignition controlled relay to connect the backup alarm/camera to the backup lamp circuit so that it will only operate when the ignition is on and the backup lamps are on



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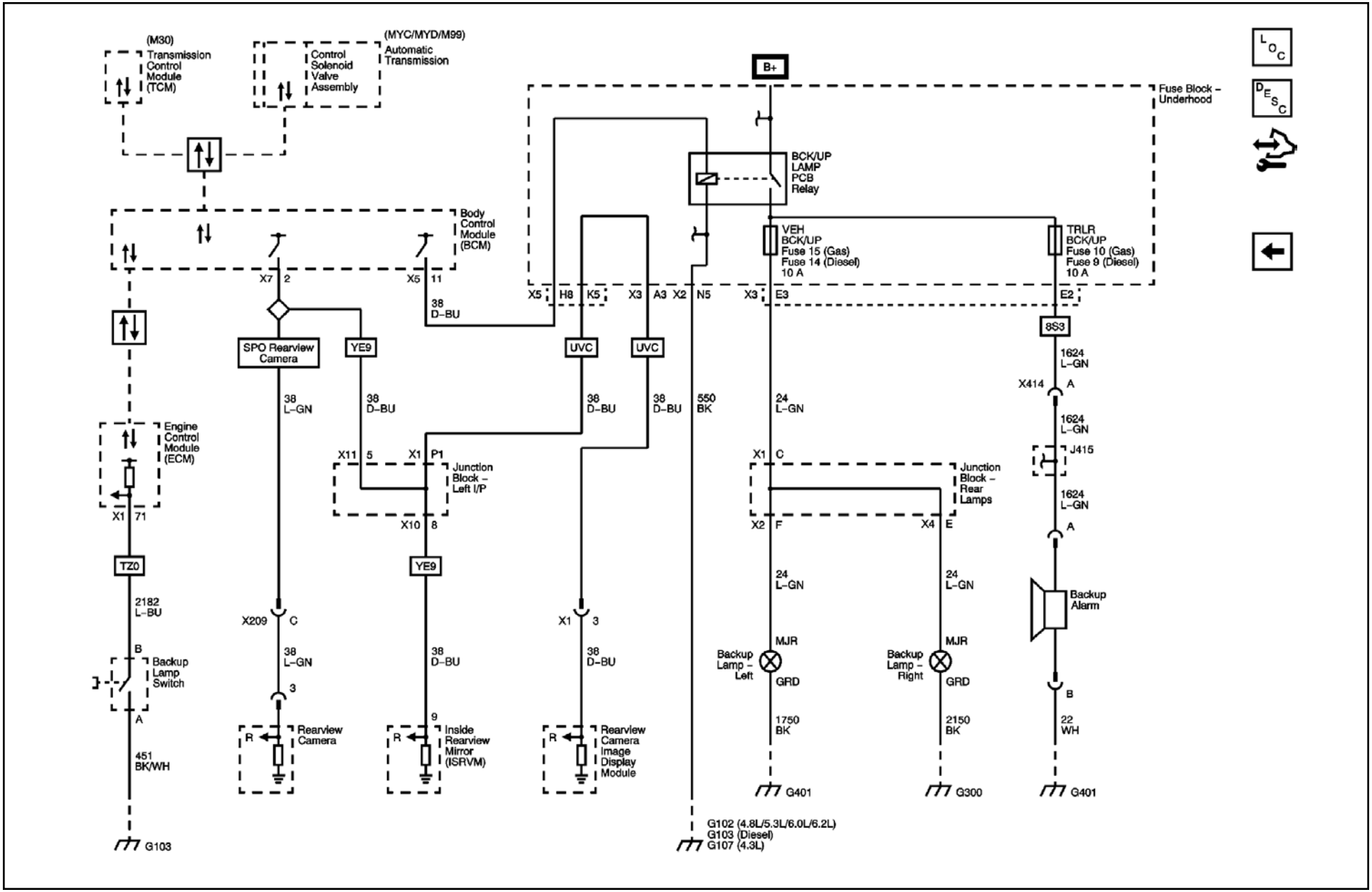
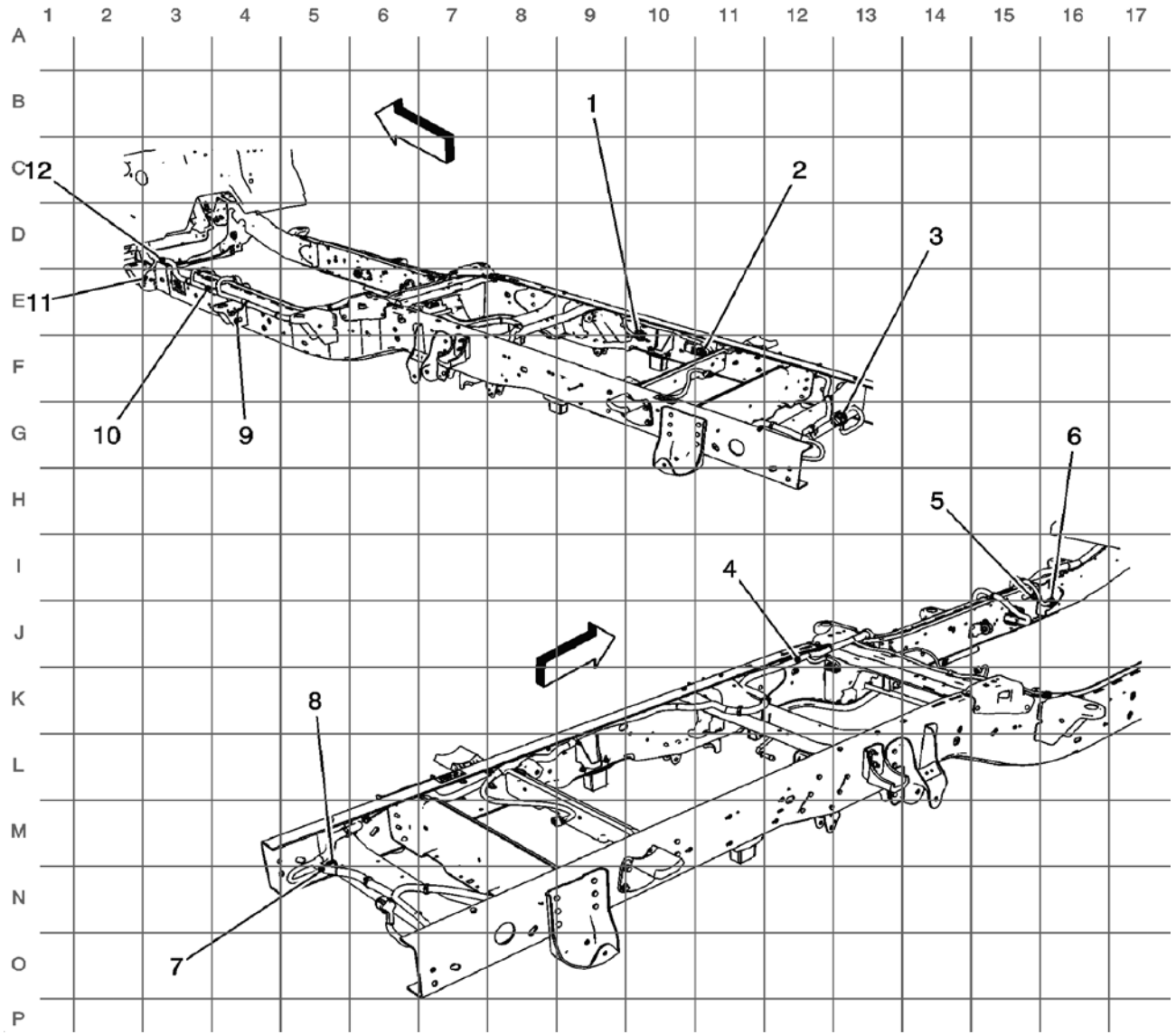
## Backup Alarm/Camera - Backup Lamp Schematic

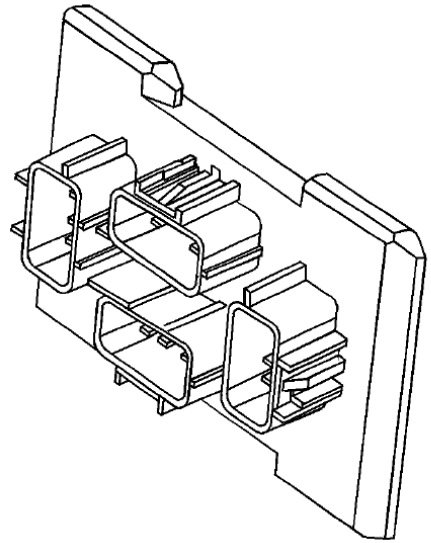


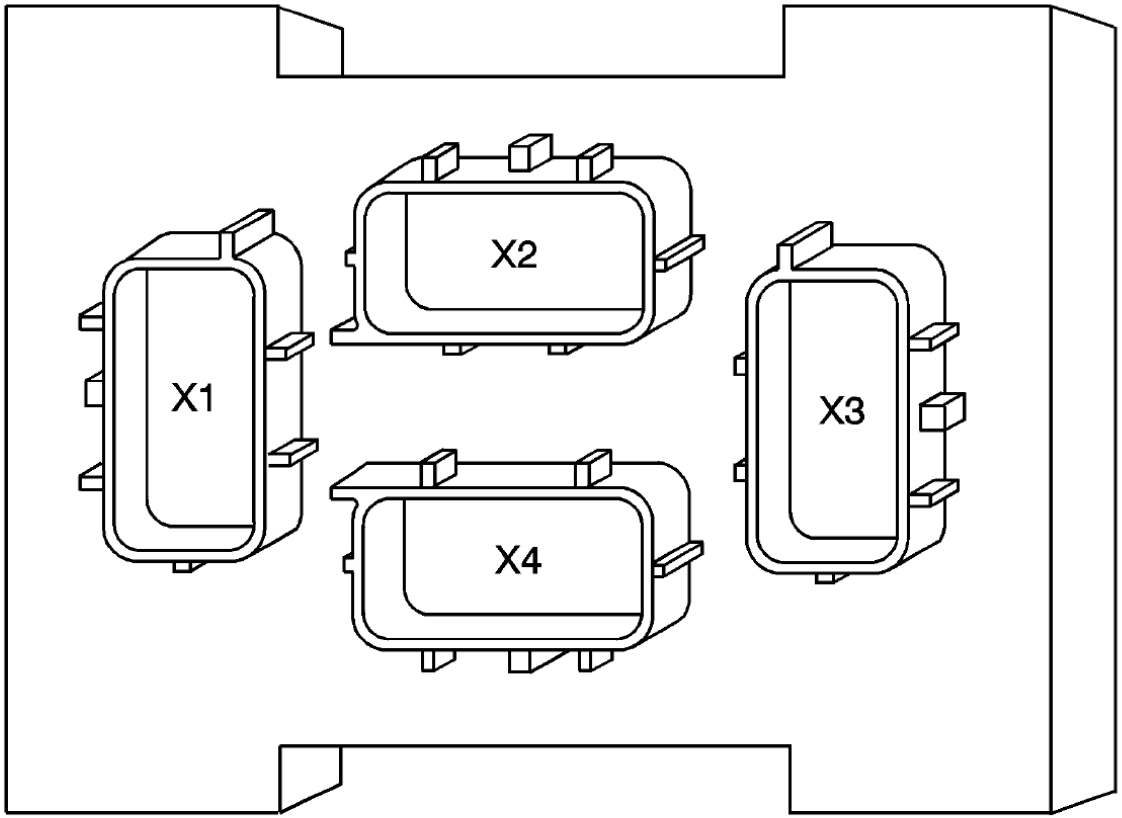
## Backup Alarm/Camera - Chassis Harness (31 Series) Routing Diagram




(1) Trailer Brake Control Relay (JL1)
(2) J422 (JL1)
(3) Trailer Connector
(4) J331 (Diesel without NQZ/LY6)
(5) X300 (LY6)
(6) X300 (Diesel)
(7) J411 (JL1)
(8) Junction Block - Rear Lamps
(9) G401
(10) J338 (JL1)
(11) G300
(12) J300 (LY6 without NQZ)

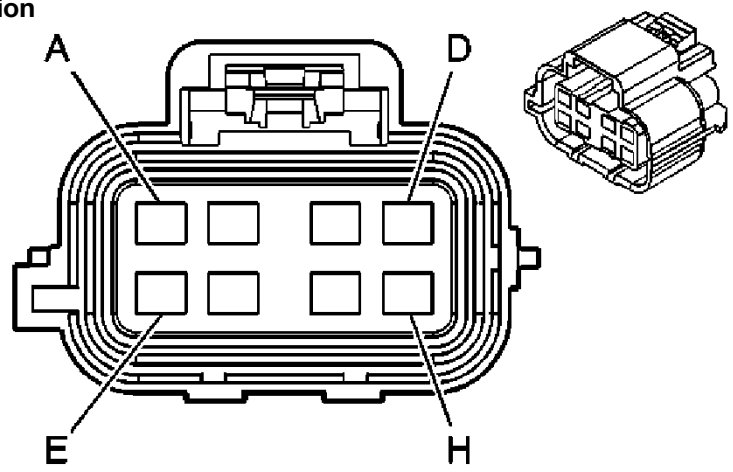
## Backup Alarm/Camera - Junction Block - Rear Lamps





# Backup Alarm/Camera - Junction Block - Rear Lamps X1

**Connector Part Information**




Harness: Chassis

OEM: 15317304

Service: 19167008

Description: 8-Way F GT 280 Sealed (BU)

**Terminal Part Information**

Pins: A, C, D, G, H

Terminal/Tray: 15304716/8

Core/Insulation Crimp: 2/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B, E

Terminal/Tray: 15304717/8

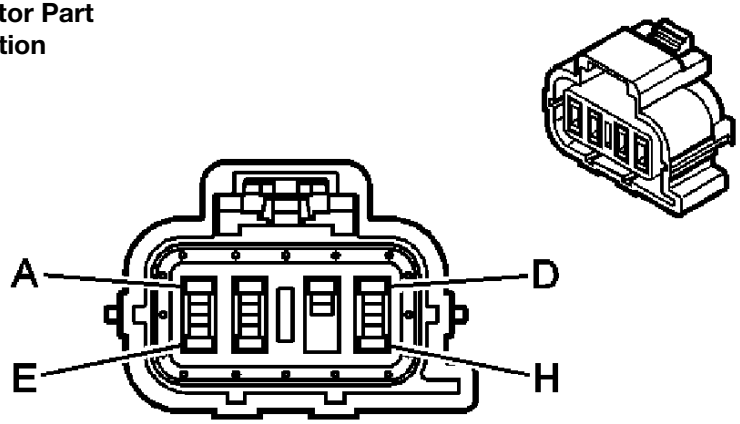
Core/Insulation Crimp: 4/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.8 YE | 18 | Left Rear Stop/Turn Lamp Supply Voltage |
| B | 2 BK | 2150 | Ground |
| C | 0.8 L-GN | 24 | Backup Lamp Supply Voltage |
| D | 0.8 BN | 2609 | Right Rear Park Lamps Supply Voltage |
| E | 2 BK | 1750 | Ground (except MEX) |
| | 3 BK | 1750 | Ground (MEX) |
| F | -- | -- | Not Used |
| G | 0.8 BN | 2509 | Left Rear Park Lamps Supply Voltage |
| H | 0.8 D-GN | 19 | Right Rear Stop/Turn Lamp Supply Voltage |

# Backup Alarm/Camera - Junction Block - Rear Lamps X2

**Connector Part Information**




Harness: Chassis

OEM: 15317305

Service: 15306338

Description: 8-Way F GT 280 Sealed (GY)

**Terminal Part Information**

Pins: A, C, D, G, H

Terminal/Tray: 15304716/8

Core/Insulation Crimp: 2/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B, E

Terminal/Tray: 15304717/8

Core/Insulation Crimp: 4/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

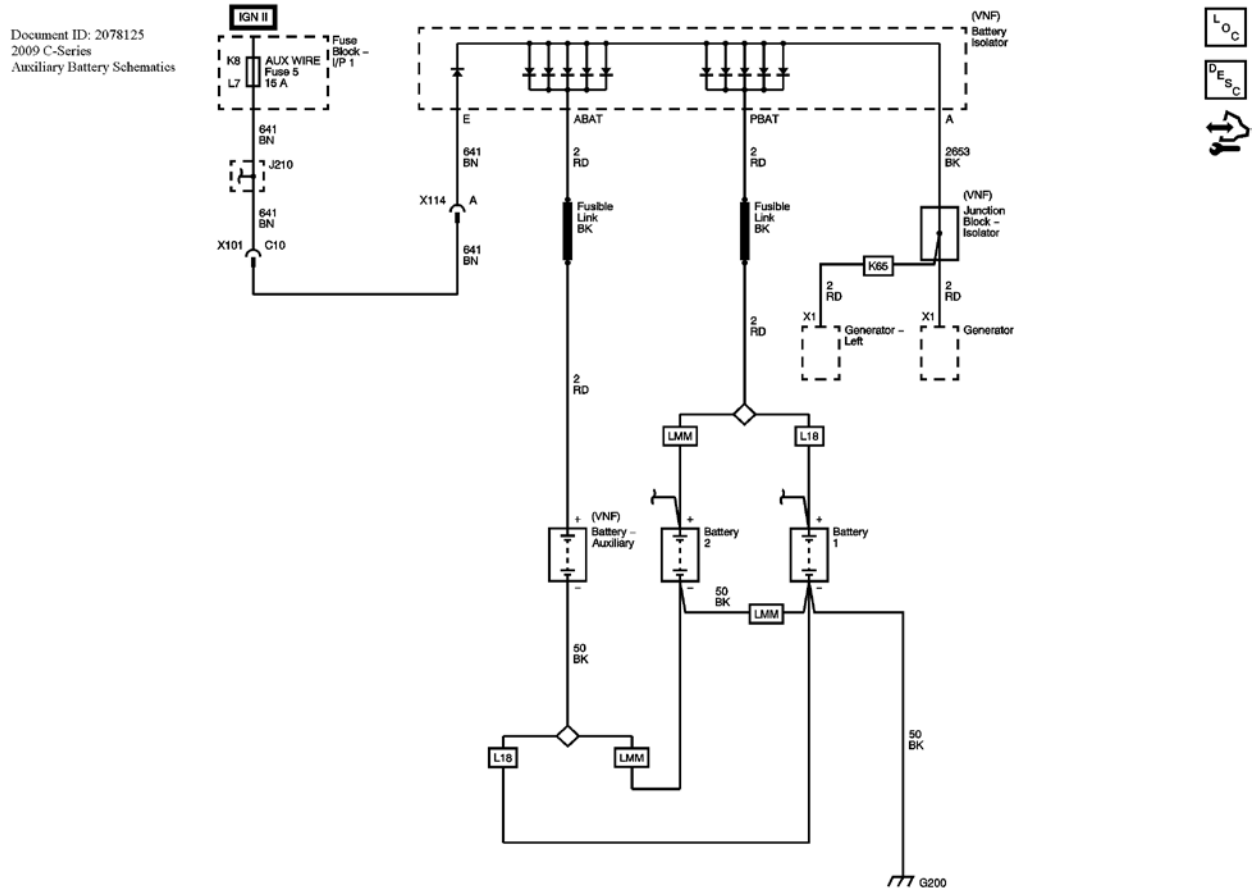
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A-B | -- | -- | Not Used |
| C | 0.8 BK | 1750 | Ground |
| D | -- | -- | Not Used |
| E | 0.8 BN | 2509 | Left Rear Park Lamps Supply Voltage |
| F | 0.8 L-GN | 24 | Backup Lamp Supply Voltage |
| G | -- | -- | Not Used |
| H | 0.8 YE | 18 | Left Rear Stop/Turn Lamp Supply Voltage |

# Battery Isolator - Medium Duty Battery Isolator Schematic

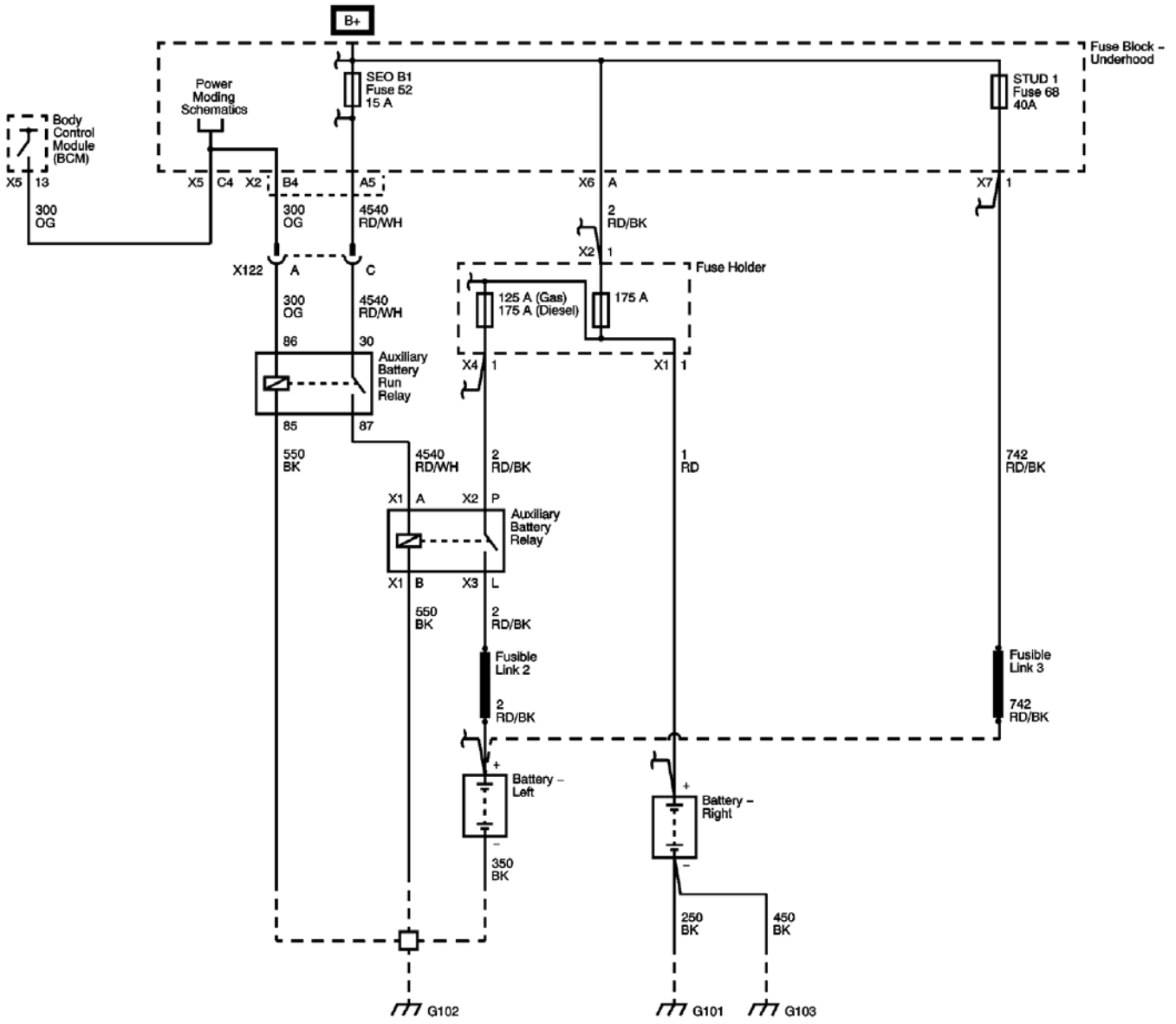
## Battery Isolator

Battery isolation can be done in a number of ways. In this section we show you two ways that GM does it. On medium duty trucks we have a diode isolator component that places in line diodes in the battery charge lead going to the alternators. On CK trucks we have a relay isolation scheme. These drawings are provided to show you how you might accomplish your application.

## Medium Duty Battery Isolator Schematic



## Battery Isolator - Auxiliary Battery Schematic



## *Battery/Ignition/Ground Feeds -*
## *Installation of Electrical Aftermarket Accessories - Battery, Ignition and Ground Feeds*

**#08-08-45-004B: Installation of Electrical Aftermarket Accessories-Battery, Ignition and Ground Feeds-Do Not Splice into Wiring Harness (Install Diode to Solenoid/Relay to Suppress Voltage Spikes) - (Nov 17, 2009)**

| Subject: | Installation of Electrical Aftermarket Accessories -- Battery, Ignition and Ground Feeds -- Do Not Splice into Wiring Harness (Install Diode to Solenoid/Relay to Suppress Voltage Spikes) |
|---|---|
| Models: | 2007-2010 Cadillac Escalade, Escalade ESV, Escalade EXT |
| | 2007-2010 Chevrolet Avalanche, Silverado, Suburban, Tahoe |
| | 2008-2010 Chevrolet Express |
| | 2007-2010 GMC Sierra, Sierra Denali, Yukon, Yukon XL, Yukon Denali, Yukon Denali XL |
| | 2008-2010 GMC Savana |

This bulletin is being revised to add the 2010 model year and the Express and Savana models. Please discard Corporate Bulletin Number 08-08-45-004A (Section 08 -- Body and Accessories).

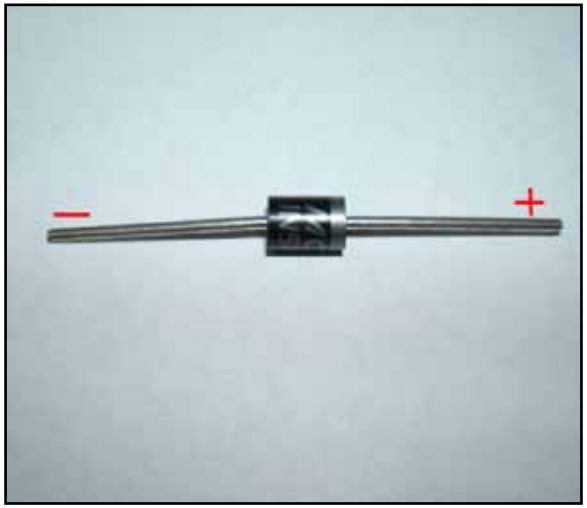


*(continued on next page)*

# Battery/Ignition/Ground Feeds - Installation of Electrical Aftermarket Accessories - Battery, Ignition and Ground Feeds (cont'd)

## Installation of a Diode to Suppress Voltage Spikes

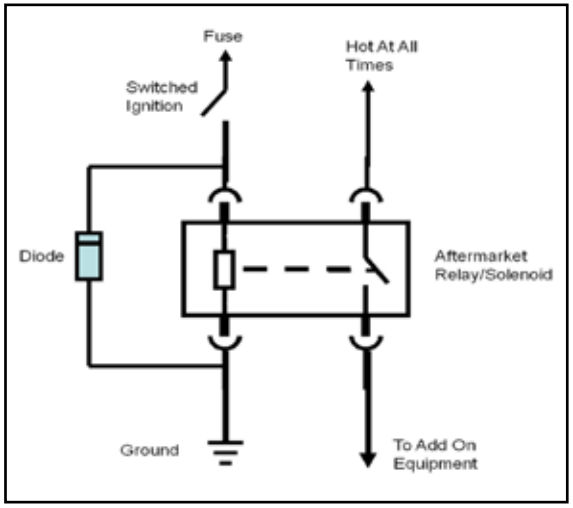
When an electromechanical solenoid or relay is de-energized rapidly by a mechanical switch or semiconductor, the collapsing magnetic field produces a substantial transient voltage in its effort to disperse the stored energy and oppose the sudden change in current flow. These voltage spikes can occur at the positive terminal when the solenoid or relay is de-energized (keyed-off). If a solenoid or relay is wired onto the Run/Crank circuit of the vehicle to control aftermarket equipment, the spikes can be transmitted onto the circuit. The spikes can permanently damage the internal circuitry of the sensitive electronic components and/or control modules that are on this bussed circuit. To prevent damage to these components, the solenoid or relay MUST have the control circuit suppressed with a diode.




Install a diode, P/N 12112422, across the coil of the solenoid. It is important that the striped end of the diode be connected to the positive terminal of the coil and the other end of the diode be connected to ground.

Important: Be sure to insulate the diode with heat shrink tubing before installing as shown in the picture above.

Notice: Some solenoids/relays may only have a positive post and will get their ground through the mounting bracket. In this case, the striped end of the diode is to be connected to the positive terminal and the other end should be connected to the ground of the solenoid/relay.




Install a diode, P/N 12112422, across the coil of the relay. It is important that the striped end of the diode be connected to the positive terminal of the coil and the other end of the diode be connected to ground. Be sure to insulate the diode with heat shrink tubing before installing.

There are two different areas on a fullsize truck or utility vehicle that power and grounds can be acquired without having to splice or cut into the existing wiring. One is the MBEC and the other is the UBEC.

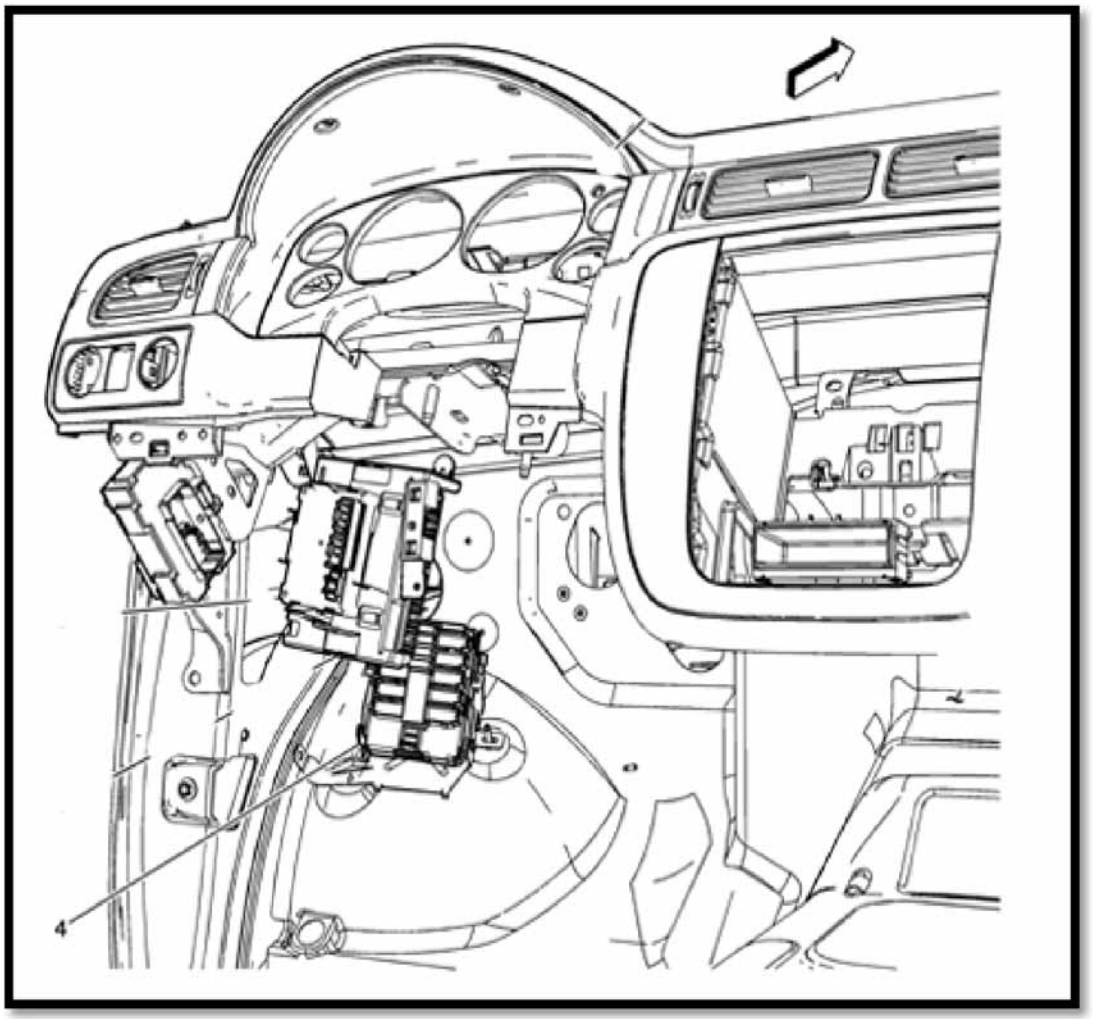


*(continued on next page)*

## *Battery/Ignition/Ground Feeds - Installation of Electrical Aftermarket Accessories - Battery, Ignition and Ground Feeds (cont'd)*

**MBEC -- Mid-Bussed Electrical Connector**

The MBEC is located below the instrument panel to the left of the brake pedal (#4 in the graphic points to the MBEC).





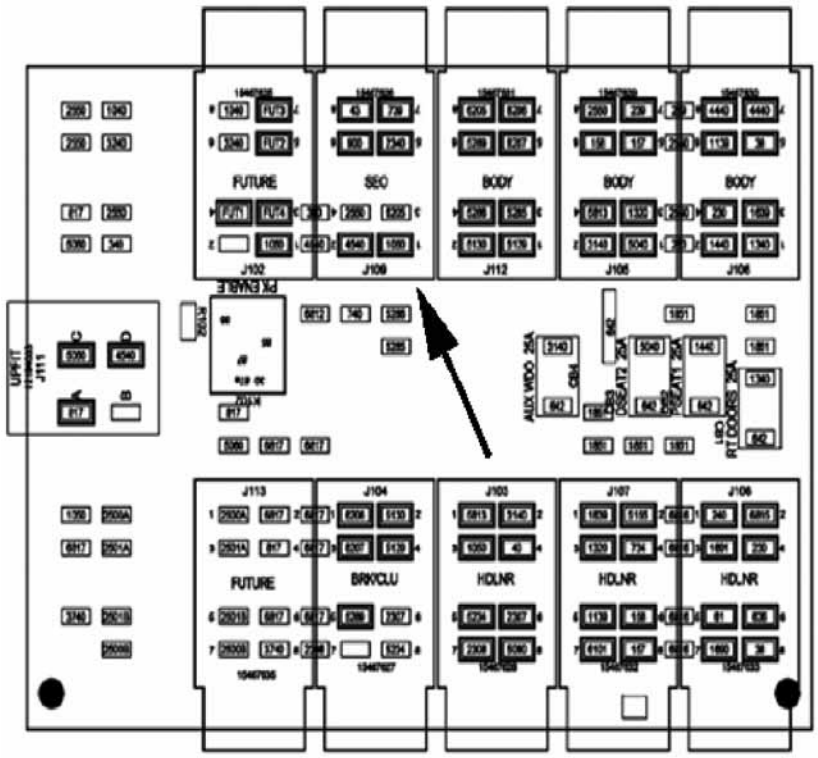

*(continued on next page)*

## Battery/Ignition/Ground Feeds - Installation of Electrical Aftermarket Accessories - Battery, Ignition and Ground Feeds (cont'd)

The MBEC has 10 positions for connecting electrical connectors. One of these positions is designated for aftermarket utilization. Install a connector (P/N 20791502) into the open position identified in the following graphic.

Within this connector, there is a fused 30 Amp battery feed, a fused 15 Amp battery feed, a fused 10 Amp Run/Crank feed, a 300 milliamp RAP (Retained Accessory Power) feed and a ground.

**Location of Connector for Aftermarket Utilization:**




Important: Connector P/N 20791502 comes with a one wire lead installed. This lead will need to be removed before the connector is pinned for use with aftermarket electrical devices.

**The pin out of the connector is as follows:**

| Cavity | Circuit Description | Circuit Number | Fuse Size |
|---|---|---|---|
| 1 | Ground | 1050 | NA |
| 2 | Battery Feed | 4540 | 15 Amps |
| 3 | Not Used | -- | -- |
| 4 | Not Used | -- | -- |
| 5 | Battery Feed | 2340 | 30 Amps |
| 6 | Not Used | -- | -- |
| 7 | Run/Crank Feed | 739 | 10 Amps |
| 8 | RAP Feed | 43 | 300 milliamps |



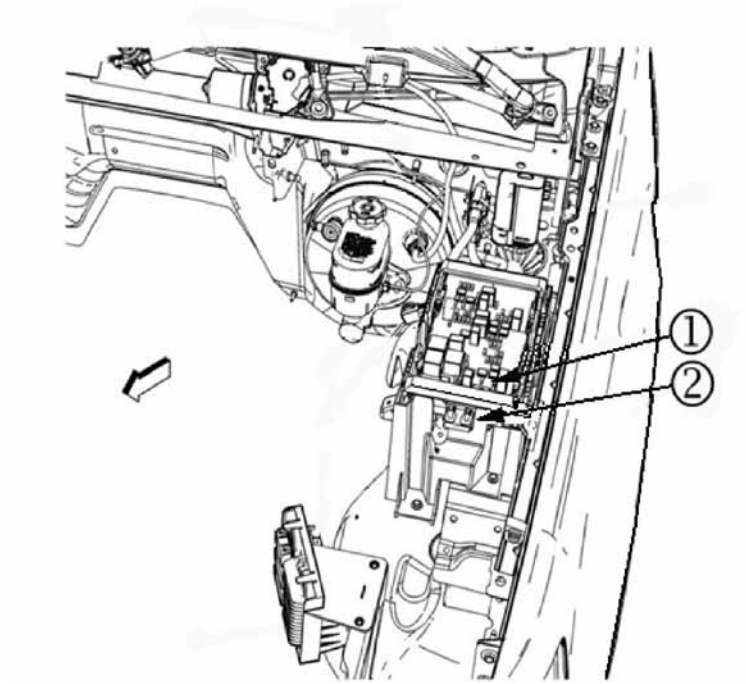
*(continued on next page)*

# Battery/Ignition/Ground Feeds - Installation of Electrical Aftermarket Accessories - Battery, Ignition and Ground Feeds (cont'd)

### UBEC -- Underhood Bussed Electrical Center

On vehicles not equipped with an Auxiliary Battery (Auxiliary Battery RPO TP2), there is a stud that could be used for a fused battery feed at the UBEC. The UBEC is located on the left side of the engine compartment (refer to graphic).

### Connecting Aftermarket Electrical Devices On Vehicles Not Equipped with TP2:




Important: A J-case fuse (1) with a 40 amp maximum rating MUST be inserted into this position (1) for the stud (2) to be powered.

Outboard M6 stud (2) can be used for a fused battery feed.

### Wire Gauge Selection

For any of these powered connections to be used, Circuit Protection Guidelines must be followed to assure that the circuit gauge is selected appropriately so that it will be protected by the fuse in case of a short circuit.

### Parts Information

| Part Number | Description | Qty |
|---|---|---|
| 12112422 | Diode | 1 |

# Electrical Charging System Description and Operation

## ELECTRICAL POWER MANAGEMENT (EPM) OVERVIEW

The electrical power management (EPM) system is designed to monitor and control the charging system and send diagnostic messages to alert the driver of possible problems with the battery and generator. This EPM system primarily utilizes existing on-board computer capability to maximize the effectiveness of the generator, to manage the load, improve battery state-of-charge and life, and minimize the system's impact on fuel economy. The EPM system performs 3 functions:

- It monitors the battery voltage and estimates the battery condition.
- It takes corrective actions by boosting idle speeds, and adjusting the regulated voltage.
- It performs diagnostics and driver notification.

The battery condition is estimated during ignition-off and during ignition-on. During ignition-off the state-of-charge (SOC) of the battery is determined by measuring the open-circuit voltage. The SOC is a function of the acid concentration and the internal resistance of the battery, and is estimated by reading the battery open circuit voltage when the battery has been at rest for several hours.

The SOC can be used as a diagnostic tool to tell the customer or the dealer the condition of the battery. Throughout ignition-on, the algorithm continuously estimates SOC based on adjusted net amp hours, battery capacity, initial SOC, and temperature.

While running, the battery degree of discharge is primarily determined by a battery current sensor, which is integrated to obtain net amp hours.

In addition, the EPM function is designed to perform regulated voltage control (RVC) to improve battery SOC, battery life, and fuel economy. This is accomplished by using knowledge of the battery SOC and temperature to set the charging voltage to an optimum battery voltage level for recharging without detriment to battery life.

The Charging System Description and Operation is divided into 3 sections. The first section describes the charging system components and their integration into the EPM. The second section describes charging system operation. The third section describes the instrument panel cluster (IPC) operation of the charge indicator, driver information center (DIC) messages, and voltmeter operation.



*(continued on next page)*

## Electrical Charging System Description and Operation (cont'd)

### CHARGING SYSTEM COMPONENTS

#### Generator

The generator is a serviceable component. If there is a diagnosed failure of the generator it must be replaced as an assembly. The engine drive belt drives the generator. When the rotor is spun it induces an alternating current (AC) into the stator windings. The AC voltage is then sent through a series of diodes for rectification. The rectified voltage has been converted into a direct current (DC) for use by the vehicles electrical system to maintain electrical loads and the battery charge. The voltage regulator integral to the generator controls the output of the generator. It is not serviceable. The voltage regulator controls the amount of current provided to the rotor. If the generator has field control circuit failure, the generator defaults to an output voltage of 13.8 volts.

#### Body Control Module (BCM)

The body control module (BCM) is a GMLAN device. It communicates with the engine control module (ECM) and the instrument panel cluster (IPC) for electrical power management (EPM) operation. The BCM determines the output of the generator and sends the information to the ECM for control of the generator field control circuit. It monitors the generator field duty cycle signal circuit information sent from the ECM for control of the generator. It monitors a battery current sensor, the battery positive voltage circuit, and estimated battery temperature to determine battery state of charge (SOC). The BCM sends idle boost requests to the ECM.

#### Battery Current Sensor

The battery current sensor is a serviceable component that is connected to the negative battery cable at the battery. The battery current sensor is a 3-wire hall effect current sensor. The battery current sensor monitors the battery current. It directly inputs to the BCM. It creates a 5 volt pulse width modulation (PWM) signal of 128 Hz with a duty cycle of 0-100 percent. Normal duty cycle is between 5-95 percent. Between 0-5 percent and 95-100 percent are for diagnostic purposes.

#### Engine Control Module (ECM)

The ECM directly controls the generator field control circuit input to the generator. The ECM receives control decisions based on messages from the BCM. It monitors the generators generator field duty cycle signal circuit and sends the information to the BCM.

#### Instrument Panel Cluster (IPC)

The IPC provides a means of customer notification in case of a failure and a voltmeter. There are 2 means of notification, a charge indicator and the driver information center (DIC) SERVICE BATTERY CHARGING SYSTEM message.



*(continued on next page)*

## Electrical Charging System Description and Operation (cont'd)

### CHARGING SYSTEM OPERATION

The purpose of the charging system is to maintain the battery charge and vehicle loads. There are 6 modes of operation and they include:

- Battery Sulfation Mode
- Charge Mode
- Fuel Economy Mode
- Headlamp Mode
- Start Up Mode
- Voltage Reduction Mode

The engine control module (ECM) controls the generator through the generator turn on signal. It monitors the generator performance though the generator field duty cycle signal circuit. The signal is a 5 volt pulse width modulation (PWM) signal of 128 Hz with a duty cycle of 0-100 percent. Normal duty cycle is between 5-95 percent. Between 0-5 percent and 95-100 percent are for diagnostic purposes. The following table shows the commanded duty cycle and output voltage of the generator:

| Commanded Duty Cycle | Generator Output Voltage |
|---|---|
| 10% | 11 V |
| 20% | 11.56 V |
| 30% | 12.12 V |
| 40% | 12.68 V |
| 50% | 13.25 V |
| 60% | 13.81 V |
| 70% | 14.37 V |
| 80% | 14.94 V |
| 90% | 15.5 V |

The generator provides a feedback signal of the generator voltage output through the generator field duty cycle signal circuit to the ECM. This information is sent to the body control module (BCM). The signal is a 5 volt PWM signal of 128 Hz with a duty cycle of 0-100 percent. Normal duty cycle is between 5-99 percent. Between 0-5 percent and 100 percent are for diagnostic purposes.

#### Battery Sulfation Mode

The BCM will enter this mode when the interpreted generator output voltage is less than 13.2 volts for 45 minutes. When this condition exists the BCM will enter Charge Mode for 2-3 minutes. The BCM will then determine which mode to enter depending on voltage requirements.



*(continued on next page)*

## Electrical Charging System Description and Operation (cont'd)

**Charge Mode**

The BCM will enter Charge Mode when ever one of the following conditions are met.

- The wipers are ON for more than 3 seconds.
- The GMLAN Climate Control Voltage Boost Mode Request is true, as sensed by the HVAC control head. High speed cooling fan, rear defogger and HVAC high speed blower operation can cause the BCM to enter the Charge Mode.
- The estimated battery temperature is less than 0°C (32°F).
- Battery state of charge is less than 80 percent.
- Vehicle speed is greater than 145 km/h (90 mph)
- Current sensor fault exists
- System voltage was determined to be below 12.56 volts
- Tow/Haul mode is enabled

When any one of these conditions is met, the system will set targeted generator output voltage to a charging voltage between 13.9-15.5 volts, depending on the battery state of charge and estimated battery temperature.

**Fuel Economy Mode**

The BCM will enter Fuel Economy Mode when the ambient air temperature is at least 0°C (32°F) but less than or equal to 80°C (176°F), the calculated battery current is less than 15 amps and greater than -8 amps, and the battery state of charge (SOC) is greater than or equal to 80 percent. Its targeted generator output voltage is the open circuit voltage of the battery and can be between 12.5-13.1 volts. The BCM will exit this mode and enter Charge Mode when any of the conditions described above are present.

**Headlamp Mode**

The BCM will enter Headlamp Mode when the headlamps are ON. Voltage will be regulated between 13.9-14.5 volts

**Start Up Mode**

When the engine is started the BCM sets a targeted generator output voltage of 14.3 volts for 30 seconds.

**Voltage Reduction Mode**

The BCM will enter Voltage Reduction Mode when the calculated battery temperature is above 0°C (32°F). The calculated battery current is less than 1 amp and greater than -7 amps, and the generator field duty cycle is less than 99 percent. Its targeted generator output voltage is 13 volts. The BCM will exit this mode once the criteria are met for Charge Mode.



*(continued on next page)*

## Electrical Charging System Description and Operation (cont'd)

**Auxiliary Battery Charging (TP2)**

The auxiliary battery provision (TP2) can be used to supply electrical power to additional equipment that the customer may choose to add, such as a slide-in camper or trailer, without discharging the vehicles primary battery. The auxiliary battery relay closes when the engine is running, in order to allow the generator to charge the auxiliary battery. The relay opens when the engine is off, so that the accessories will not discharge the vehicles primary battery, which is used for engine starting. If the vehicle is equipped with an auxiliary battery, the relay will be located on the driver's side of the vehicle, next to the underhood electrical center. Generally, a fuse should not be used in the STUD 1 Fuse 68 position of the underhood fuse block, if the vehicle is equipped with an auxiliary battery. A plastic plug may be installed in this position instead of a fuse. If a fuse is installed in this position, the accessories will discharge the primary battery in addition to the auxiliary battery.

### INSTRUMENT PANEL CLUSTER (IPC) OPERATION

**Charge Indicator Operation**

The instrument panel cluster (IPC) illuminates the charge indicator and displays a warning message in the driver information center (DIC) when the one or more of the following occurs:

- The engine control module (ECM) detects that the generator output is less than 11 volts or greater than 16 volts. The IPC receives a GMLAN message from the ECM requesting illumination.
- The BCM determines that the system voltage is less than 11 volts or greater than 16 volts.
- The IPC receives a GMLAN message from the body control module (BCM) indicating there is a system voltage range concern.
- The IPC performs the displays test at the start of each ignition cycle. The indicator illuminates for approximately 3 seconds.
- The ignition is ON, with the engine OFF.

**Battery Voltage Gauge Operation**

The IPC displays the system voltage as received from the BCM over the GMLAN serial data circuit. If there is no communication with the BCM then the gauge will indicate minimum.

This vehicle is equipped with a regulated voltage control (RVC) system. This system turns off the generator when it is not required in order to improve fuel economy. The generator will turn back on when additional voltage is required. This will cause the voltmeter to fluctuate between 12 and 14 volts as opposed to non-regulated systems which usually maintain a more consistent reading of 14 volts. This fluctuation with the RVC system is normal system operation and NO repairs should be attempted.

**Service Battery Charging System**

The BCM and the ECM will send a GMLAN message to the DIC for the SERVICE BATTERY CHARGING SYSTEM message to be displayed. It is commanded ON when a charging system DTC is a current DTC. The message is turned OFF when the conditions for clearing the DTC have been met.

# Engine Idle Up

## ELEVATED IDLE / PTO / HIGH IDLE ARE ALL DIFFERENT OPTIONS

There have been some questions regarding the differences between Elevated Idle, PTO, and High Idle. The below information is to help provide additional information as to what each of the options are:

### Elevated Idle

Is a standard option on all 6.6L Diesel Engines, which elevates the engine idle speed from base idle to 1050 rpms when outside temperatures are below 32°F (0°C) and the engine coolant temperature is below 150°F (65°C). This feature enhances heater performance by raising the engine coolant temperature faster. It can be turned on or off, please refer to the "Duramax Diesel Supplement" Owner's Manual for more information.

### PTO (power take-off)

Is available as an option (RPO PTO) only on 3500 Chassis Cab models equipped with the 6.6L Diesel Engine RPO LMM and Allison 6-speed transmission RPO MW7. The PTO allows the user to create an auxiliary power source for running add-on equipment, such as salt spreaders, pumps, winches, lift buckets, etc. The dash mounted PTO switch is used to turn on the PTO and controls engine speed to values higher than normal base idle. Refer to UI Bulletins #79 and #80 on our website www.gmupfitter.com.

### High Idle

Is available as an option (RPO UF3) on certain HD models with cruise control. This system can be used to increase your engine idle speed for whatever reason an owner wishes: more generator output at idle, belt driven add on equipment, etc. The cruise control buttons located on the left hand side of the steering wheel are used to operate the High Idle option. If the option was available for your vehicle, and it could have been built with it, you can add it. Check the online order guide to determine if your vehicle could have been built with option UF3.
http://eogld.ecomm.gm.com/dmdindex.htm



*(continued on next page)*

## Engine Idle Up (cont'd)

**ADDING PTO OPTION TO A VEHICLE WITHOUT THE OPTION**

**Condition/Concern:**

Some owners may request to add the PTO option to their vehicle when it is not equipped with the option. This option is available on 3500 Chassis Cab Models with the 6.6L Diesel engine only. The PTO option is now far more integrated with the vehicle than past models and utilizes the following components:

- The body control module (BCM)
- The engine control module (ECM)
- The instrument panel cluster (IPC)
- The PTO gear
- The PTO mode select switch
- The power take off module (PTOM)
- The remote PTO enable switch
- The PTO relay
- The transmission control module (TCM)

**Recommendation/Instructions:**

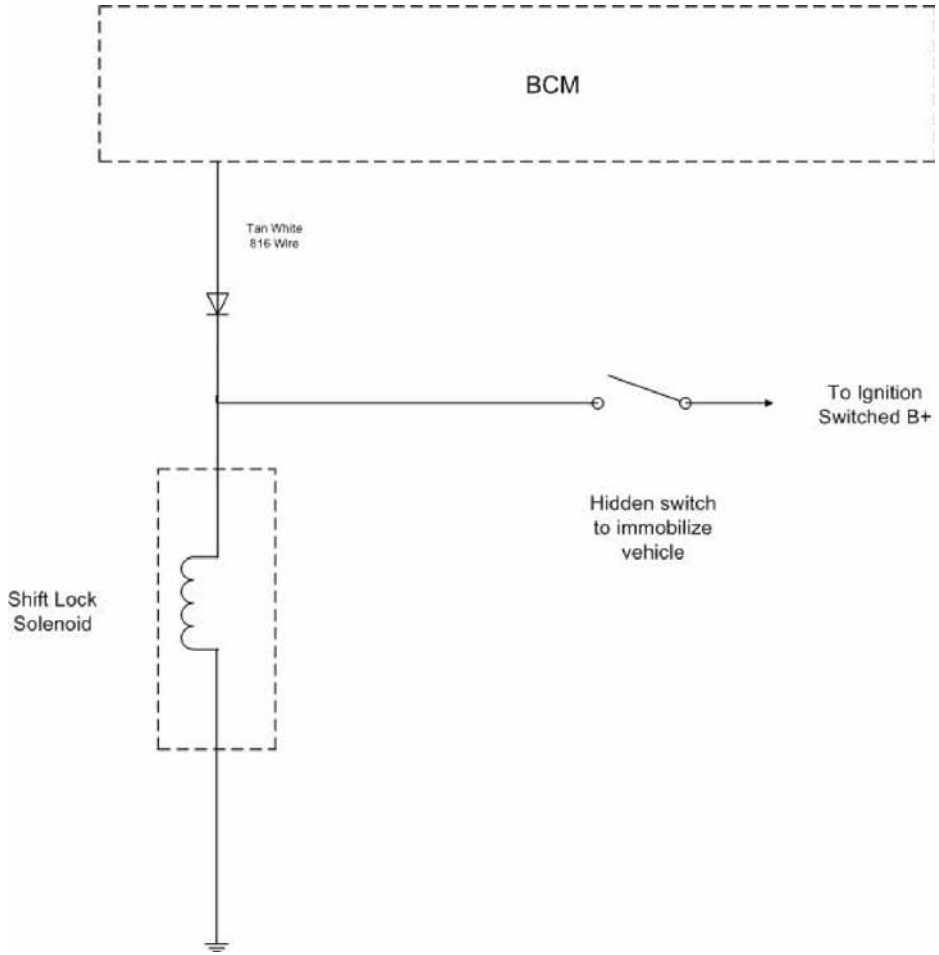
Due to the PTO's complex integration with the vehicle it is NOT recommended to add this option to any vehicle not already equipped with the OEM PTO option.

# Immobilizer

**Remote Vehicle Immobilizer**

For applications where it is desirable to leave the vehicle running but assure that it cannot be moved an external +12 v signal can be supplied to the shift interlock solenoid assuring the vehicle will remain in park – see schematic and location drawings.

**Remote Vehicle Immobilizer Schematic**



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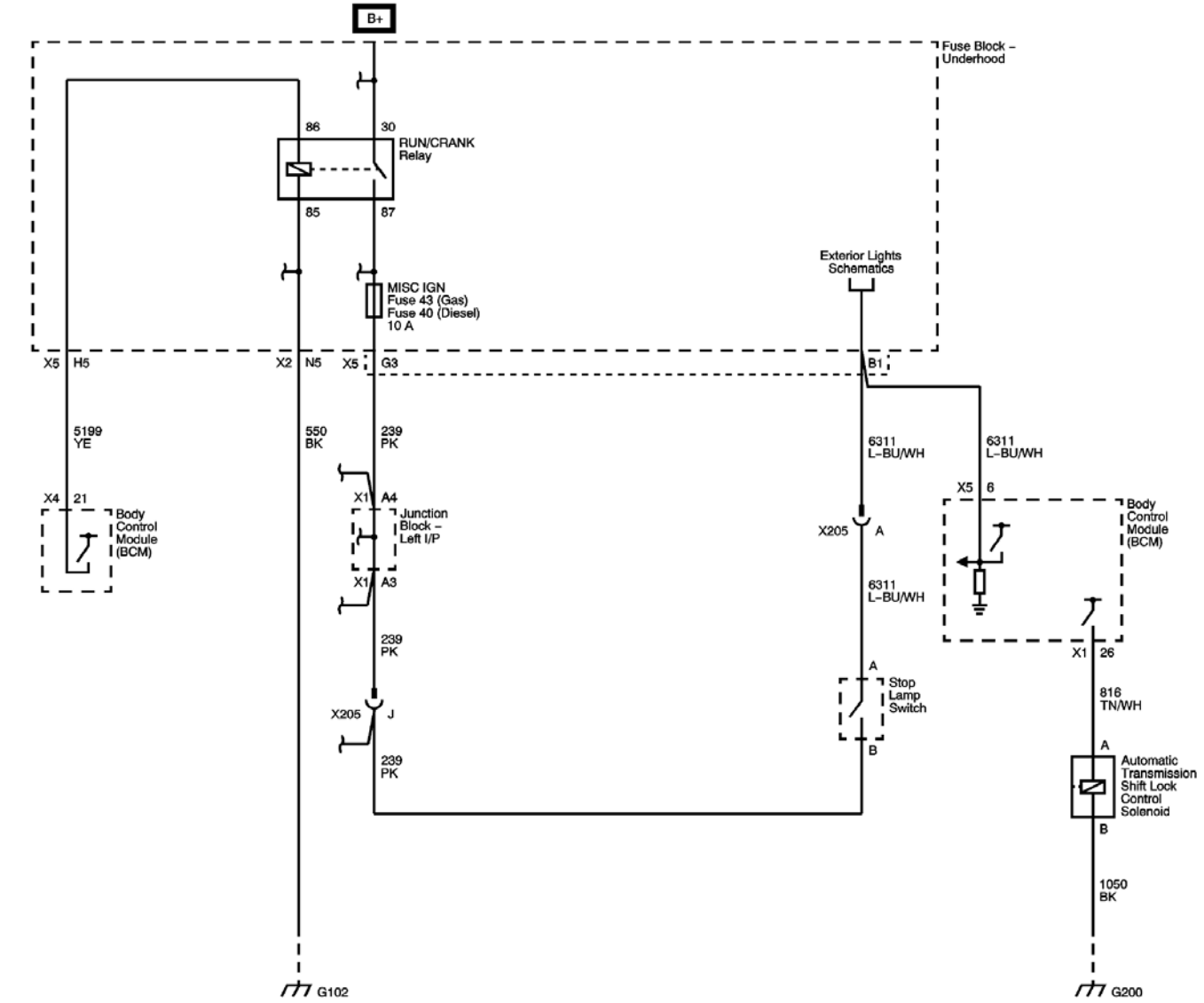
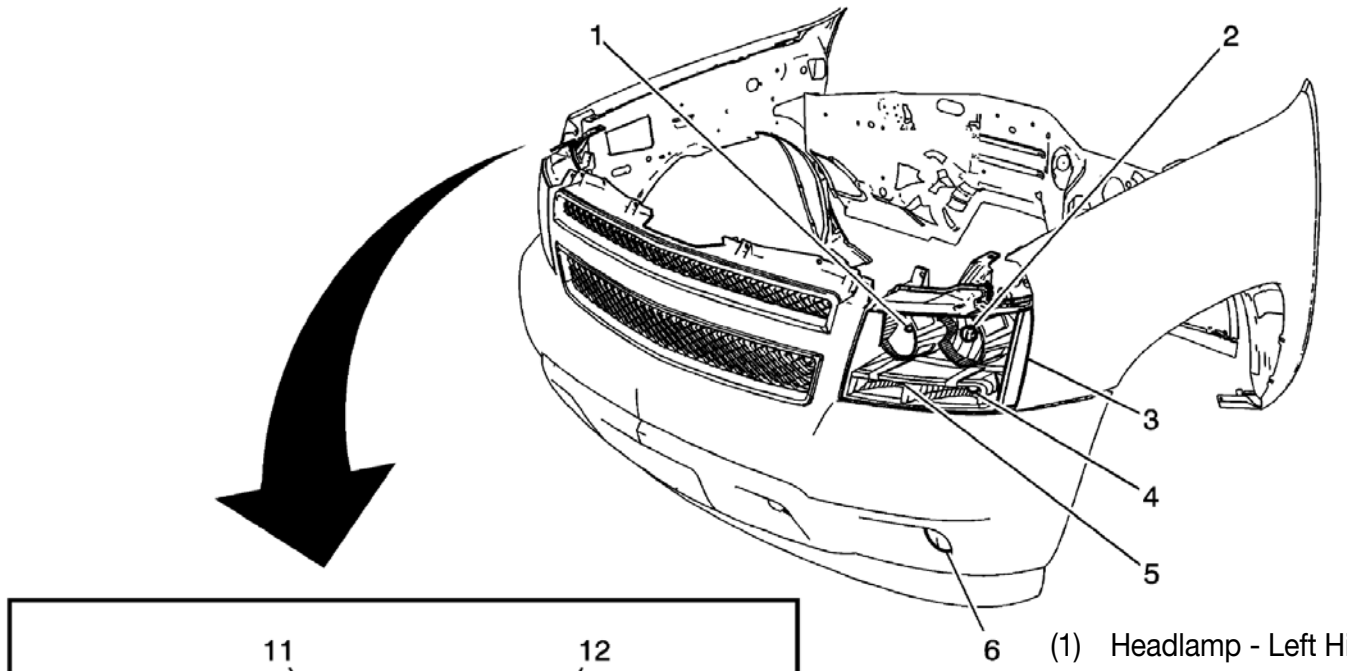
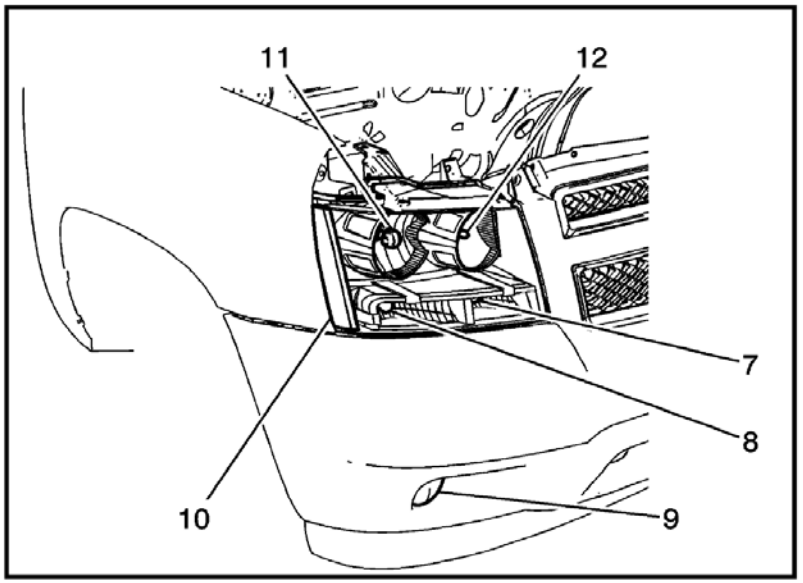
## *Immobilizer (cont'd)*

**Remote Vehicle Location Drawing**



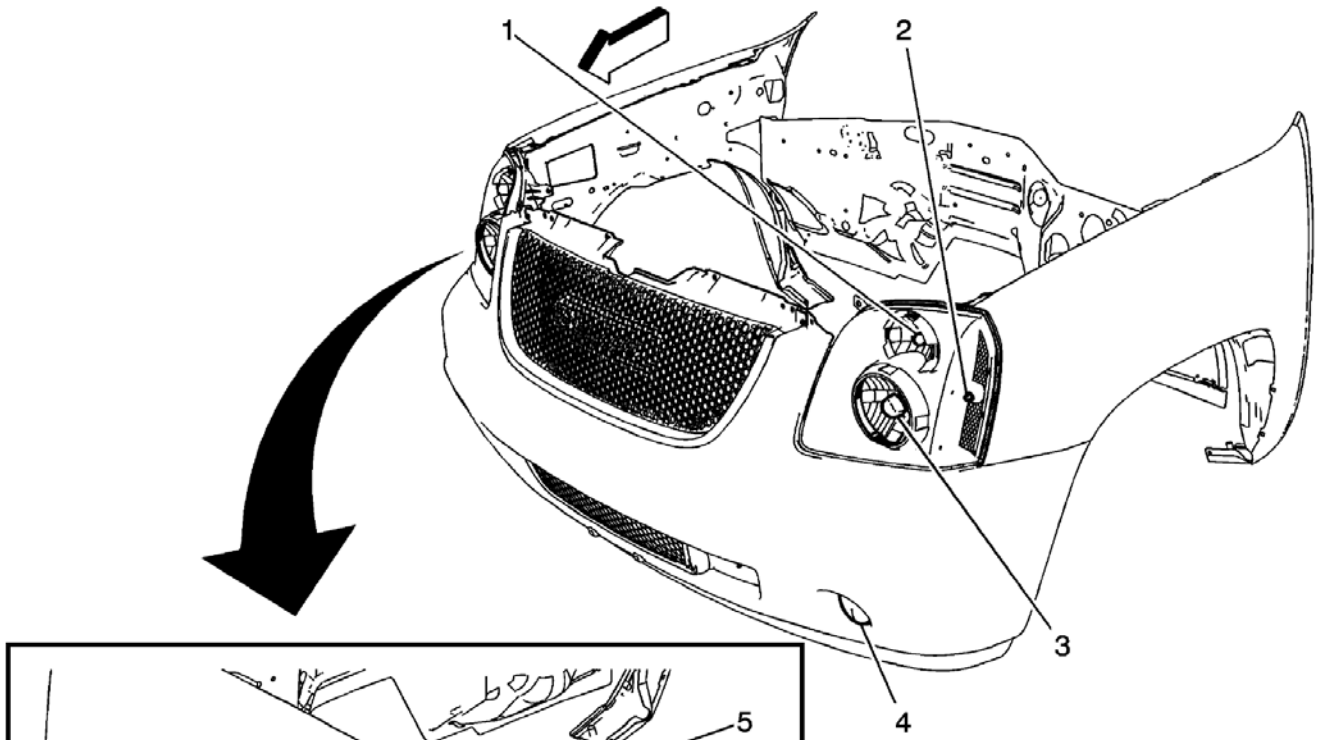
## Forward Lighting - Front of Vehicle Components (X88)

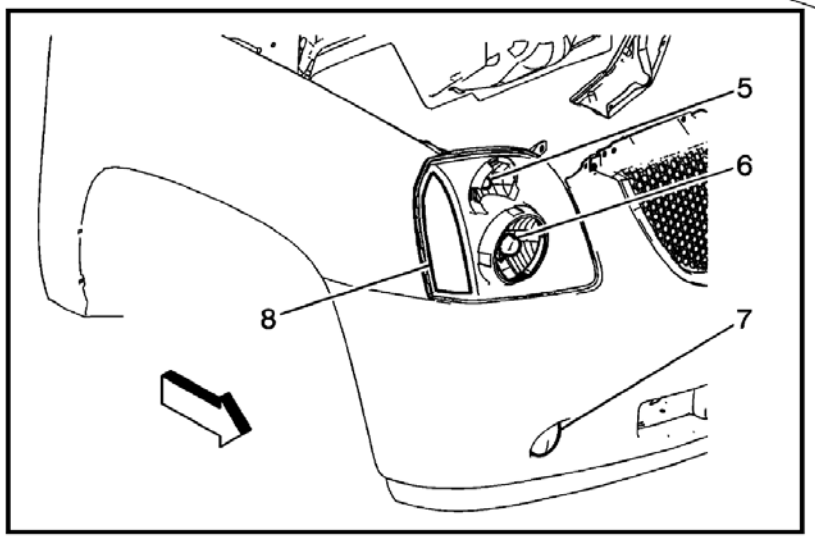



(1) Headlamp - Left High Beam
(2) Headlamp - Left Low Beam
(3) Side Marker Lamp - Left Front
(4) Park/Turn Signal Lamp - Left
(5) Daytime Running Lamp (DRL) - Left
(6) Fog Lamp - Left Front (T96)
(7) Daytime Running Lamp (DRL) - Right
(8) Park/Turn Signal Lamp - Right
(9) Fog Lamp - Right Front (T96)
(10) Side Marker Lamp - Right Front
(11) Headlamp - Right Low Beam
(12) Headlamp - Right High Beam

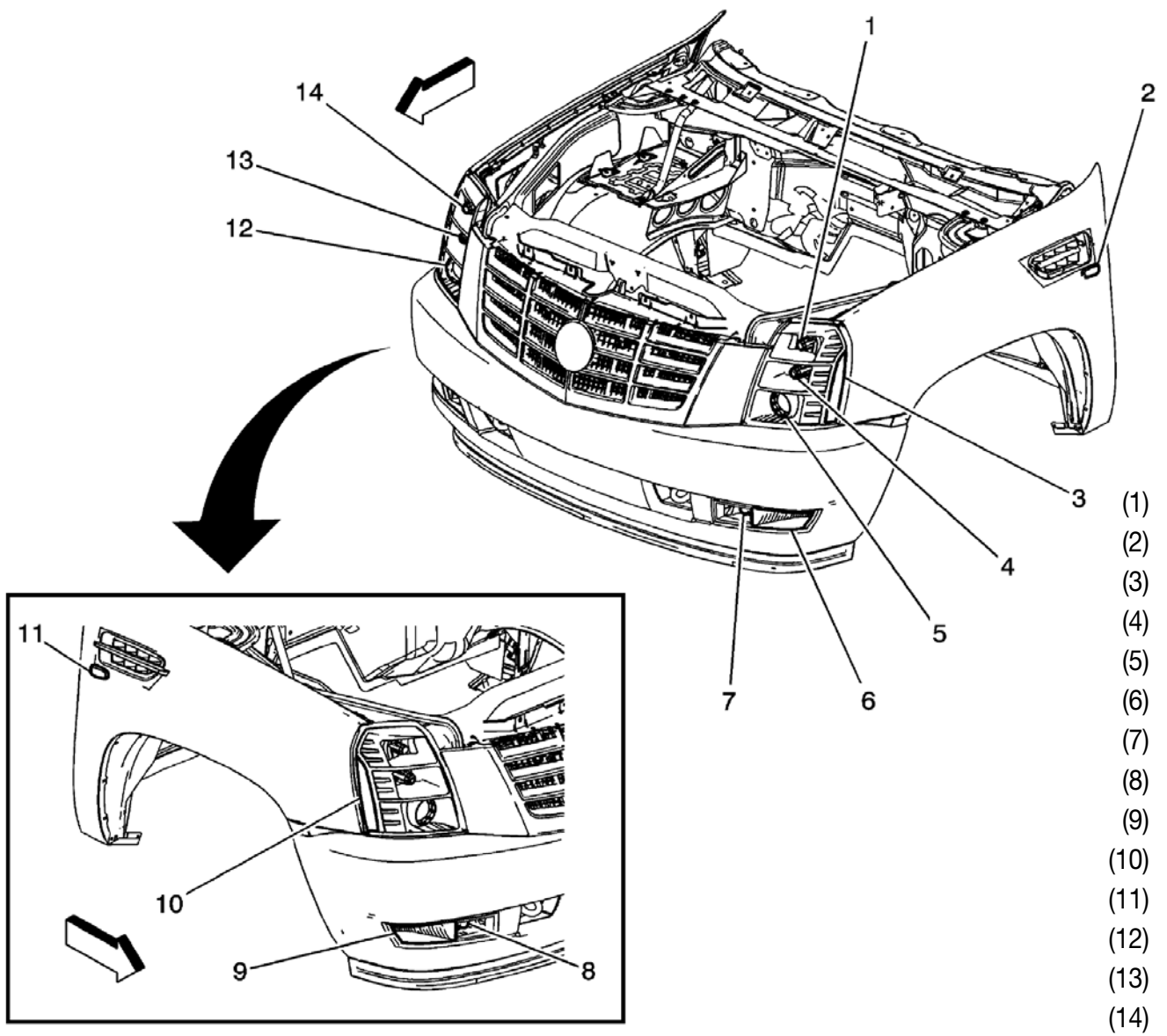
## Forward Lighting - Front of Vehicle Components (Z88)



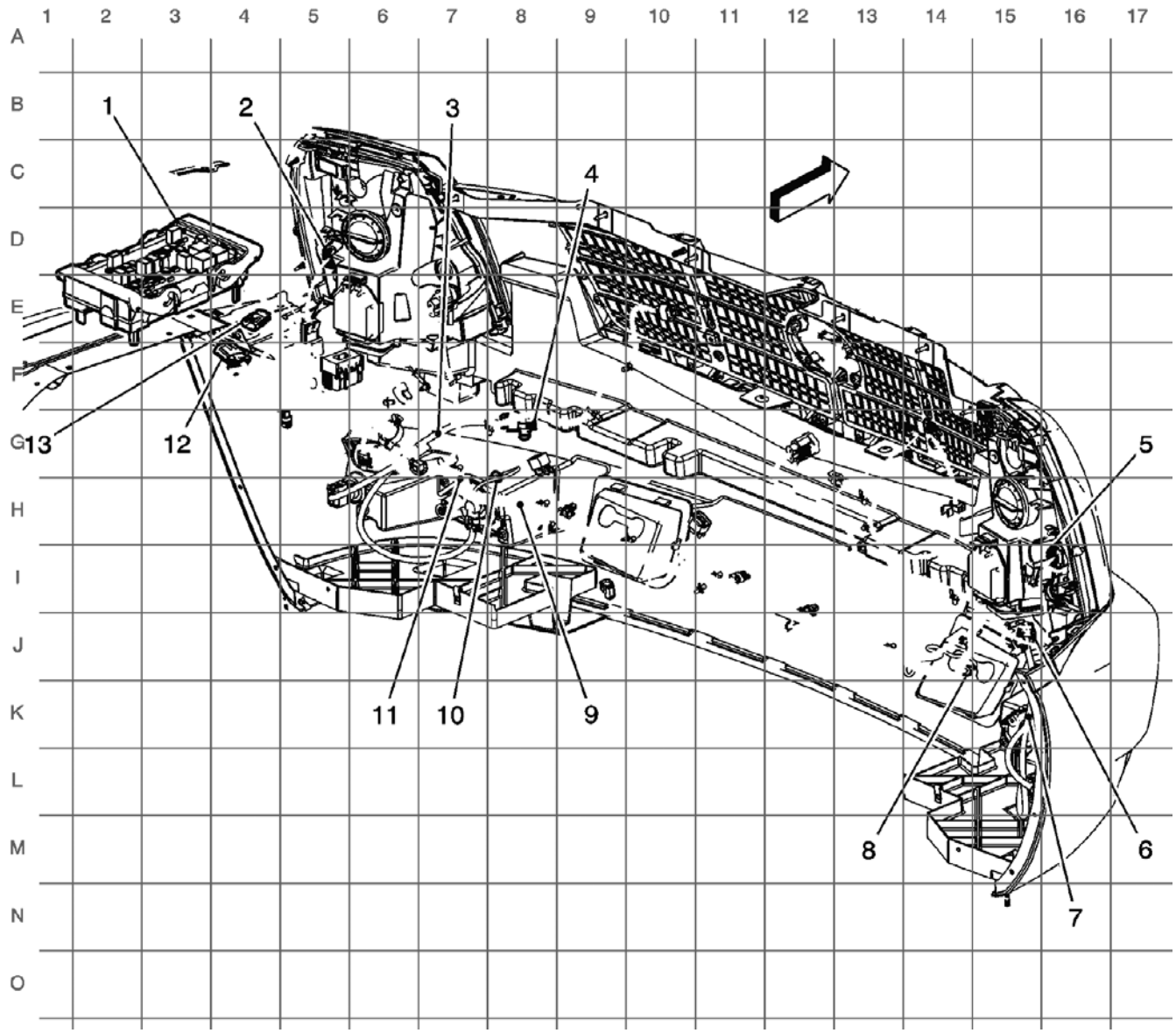

(1) Park/Turn Signal Lamp - Left
(2) Side Marker Lamp - Left Front
(3) Headlamp - Left
(4) Fog Lamp - Left Front (T96)
(5) Park/Turn Signal Lamp - Right
(6) Headlamp - Right
(7) Fog Lamp - Right Front (T96)
(8) Side Marker Lamp - Right Front

## Forward Lighting - Front of Vehicle Components (Z75)



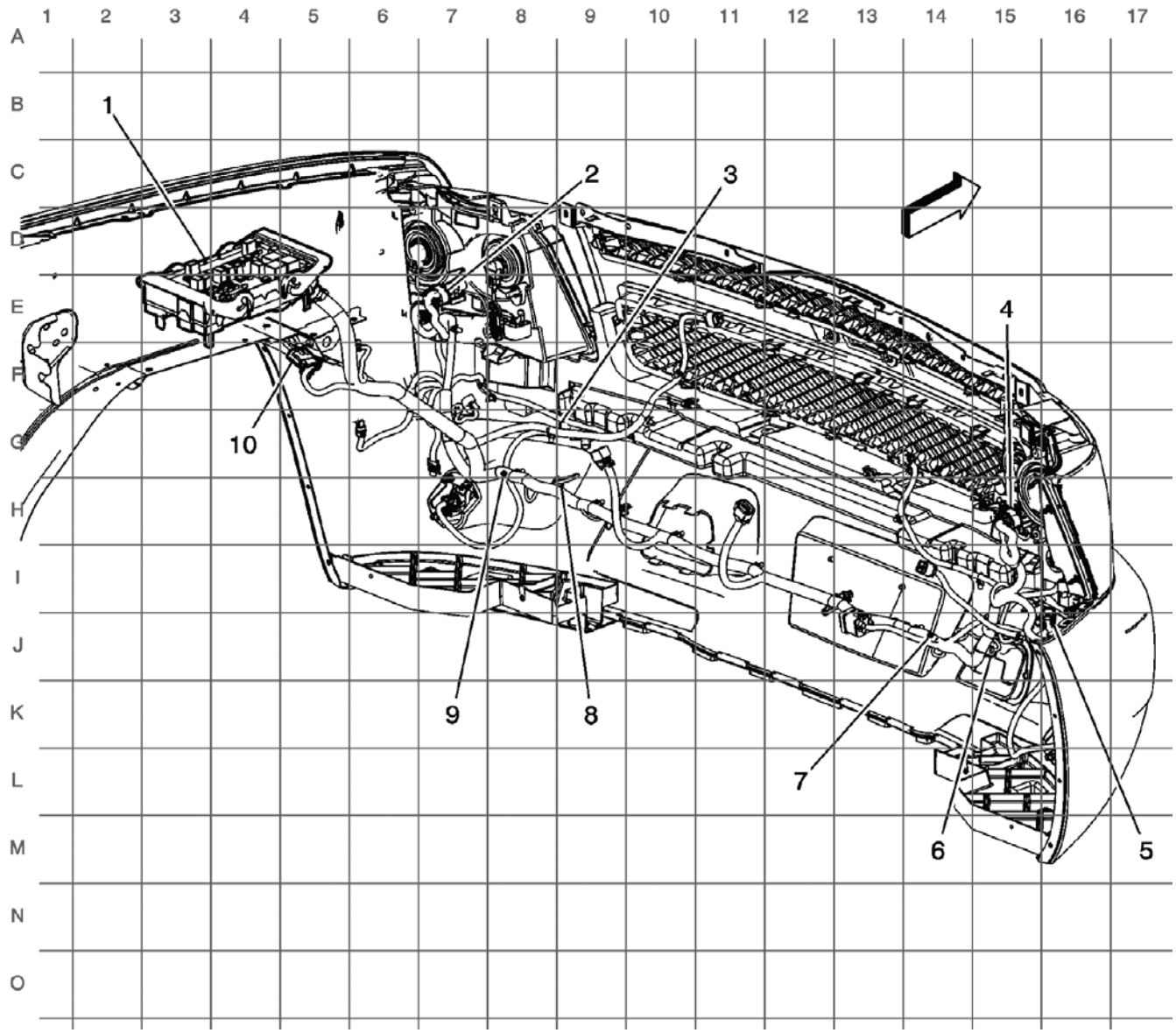

(1) Park Lamp - Left Front (Z75)
(2) Repeater Lamp - Left Front (TR2)
(3) Side Marker Lamp - Left Front
(4) Daytime Running Lamp (DRL) - Left
(5) Headlamp - Left
(6) Turn Signal Lamp - Left Front
(7) Fog Lamp - Left Front (T96)
(8) Fog Lamp - Right Front (T96)
(9) Turn Signal Lamp - Right Front
(10) Side Marker Lamp - Right Front
(11) Repeater Lamp - Right Front (TR2)
(12) Headlamp - Right
(13) Daytime Running Lamp (DRL) - Right
(14) Park Lamp - Right Front (Z75)

## Forward Lighting - Lamp Harness Routing (HP2)



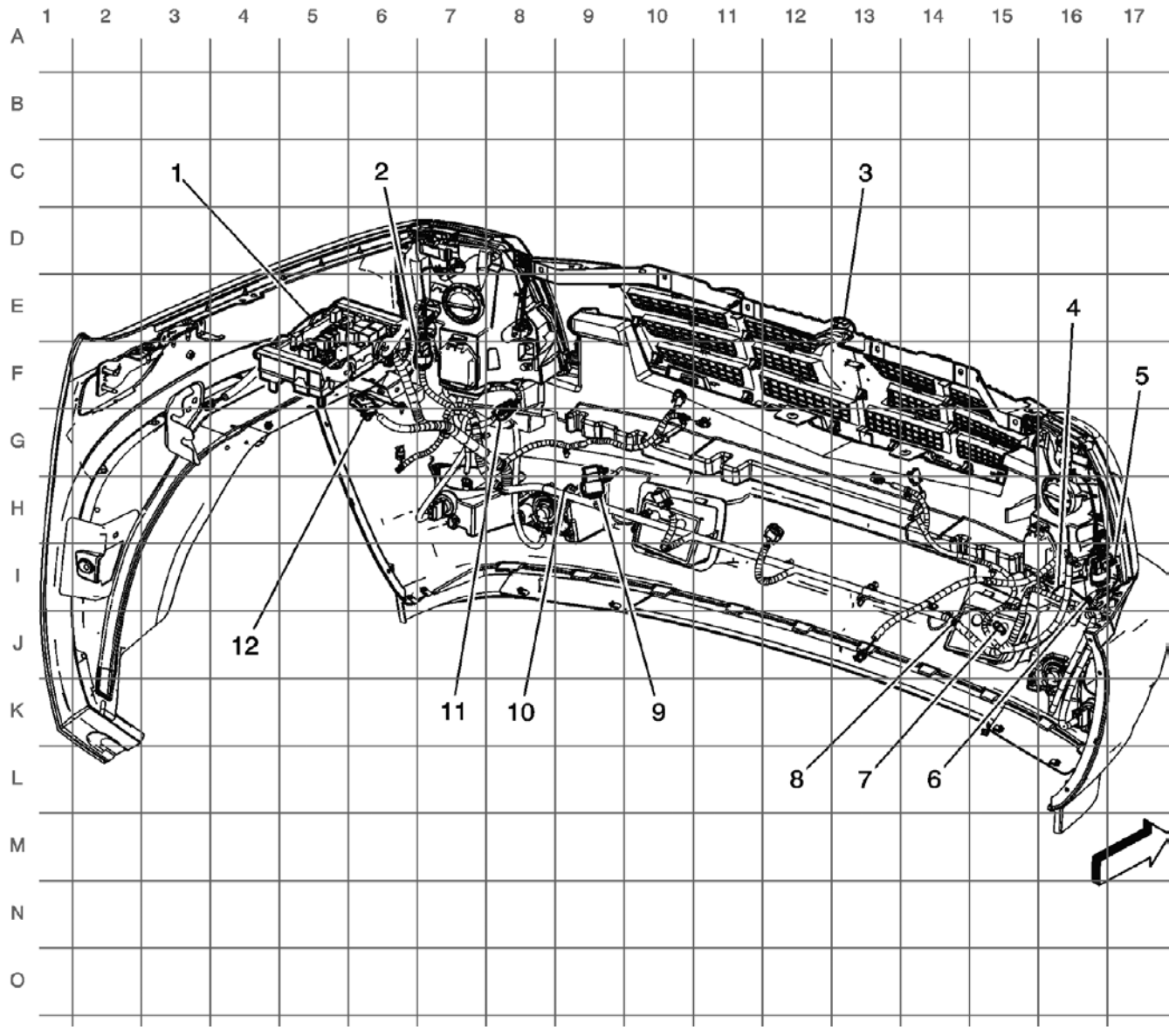

(1) Fuse Block - Underhood
(2) X100 (X88 or Z75)
(3) J160
(4) X101
(5) X106
(6) X104
(7) J101
(8) G101
(9) J162
(10) G100
(11) J161
(12) X103
(13) X105 (T96)

## Forward Lighting - Lamp Harness Routing (X88)



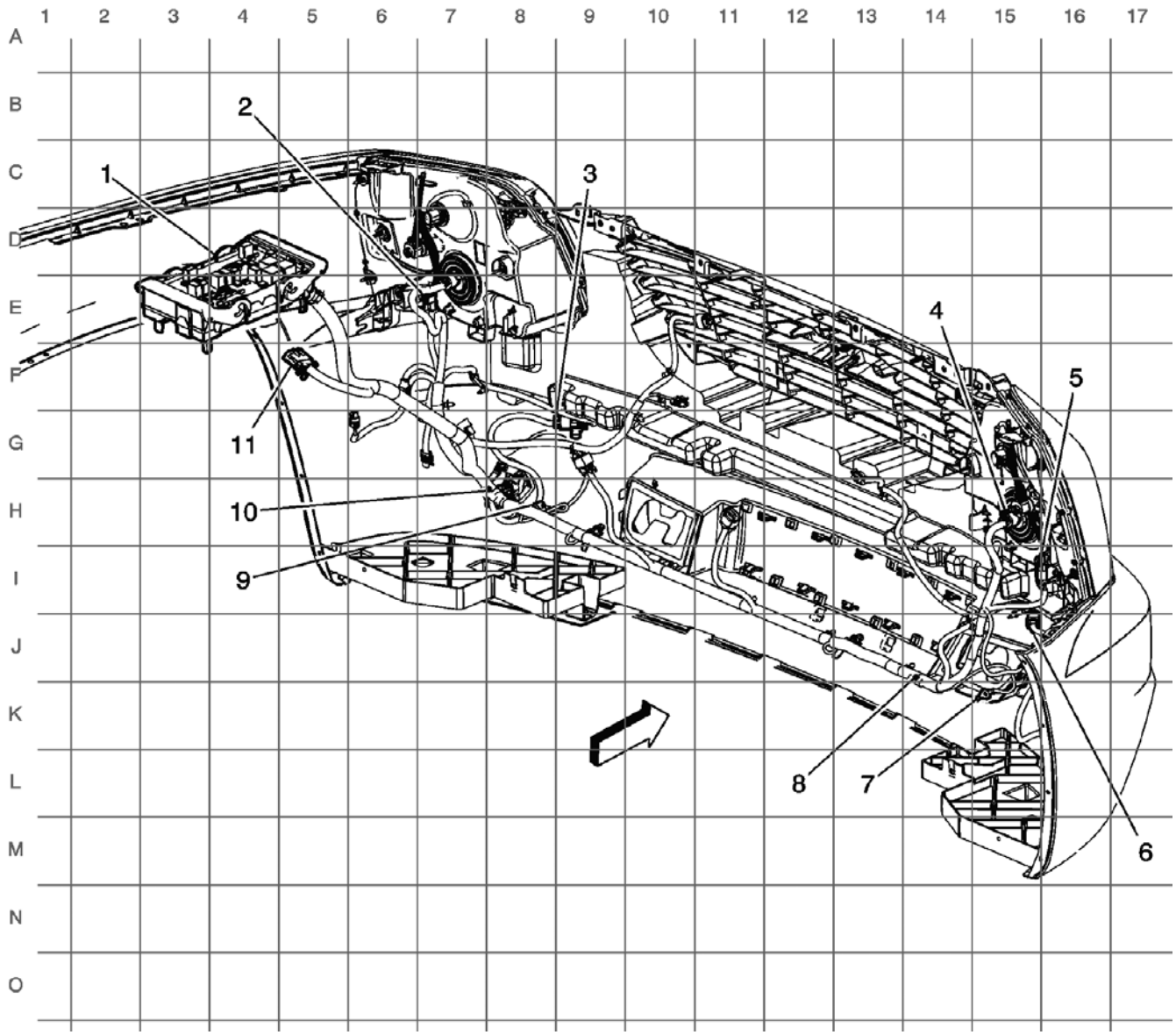

(1) Fuse Block - Underhood
(2) X100
(3) X102 (T96)
(4) X106
(5) X105 (T96)
(6) G101
(7) J101
(8) G100
(9) J100
(10) X103

## Forward Lighting - Lamp Harness Routing (Z75)




(1) Fuse Block - Underhood
(2) X100 (without EXP)/X140 (EXP)
(3) Grille
(4) X104 (T96)
(5) X106 (without EXP)/X141 (EXP)
(6) J103
(7) G101
(8) J101
(9) Horn Relay (VD1)
(10) J100
(11) X101 (T96)
(12) X103

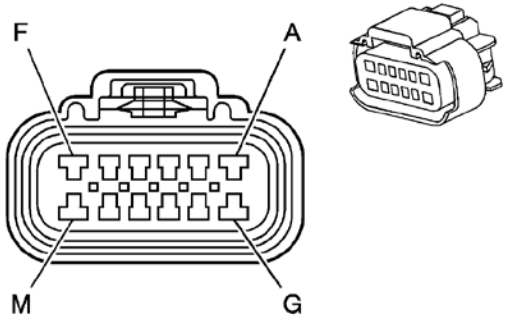
## Forward Lighting - Lamp Harness Routing (Z88)

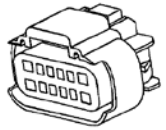



(1) Fuse Block - Underhood
(2) X107 (VYU)
(3) X101
(4) X102 (T96)
(5) X104
(6) X108 (VYU)
(7) G101
(8) J101
(9) G100
(10) J100
(11) X103

# Forward Lighting - Headlamp - Left (T4Q)

**Connector Part Information**



Harness:
Forward Lamp

OEM Connector: 15326939

Service Connector: 88988440

Description: 12-Way F GT 150 280 Series, Sealed (BK)

**Terminal Part Information**

Pins: A, F, M

Terminated Lead: 13575405

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304719/19

Core/Insulation Crimp: 2/5

Pins: B-E, L, J

Terminated Lead: Pins B, D, E - 13575413

Terminated Lead: Pins C - 13327112

Terminated Lead: Pins L, J - 13327113

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191819/8

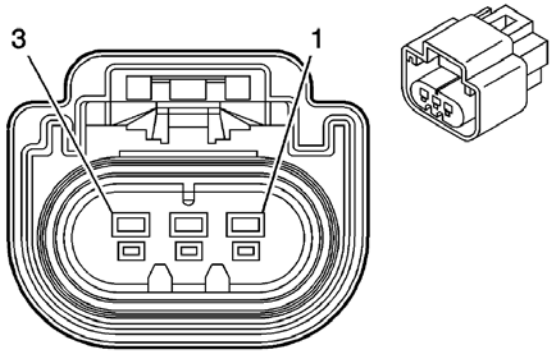
Core/Insulation Crimp: Pins B-E - E/1

Core/Insulation Crimp: Pins L, J - 2/1

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 1 YE | 712 | Left Headlamp Low Beam Control |
| B | 0.5 L-GN/BK | 592 | DRL Low Control |
| C | 0.35 D-BU | 3204 | Outage Detection Signal |
| D | 0.5 D-BU | 545 | DRL Control |
| E | 0.5 BN | 2509 | Left Front Park Lamp Control |
| F | 1 BK | 150 | Ground |
| G-H | -- | -- | Not Used |
| J | 1 BK | 150 | Ground |
| K | -- | -- | Not Used |
| L | 0.8 D-GN/WH | 711 | Left Headlamp High Beam Control |
| M | 1 BK | 150 | Ground |

# Forward Lighting - Headlamp - Left (Z88)

**Connector Part Information**






Harness:
Forward Lamp

OEM Connector: 13511996

Service Connector: 19149288

Description: 3-Way F GT 150 Series, Sealed (GY)

**Terminal Part Information**

Terminated Lead: Pins 1, 2 - 13327113

Terminated Lead: Pins 3 - 13575413

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191819/8

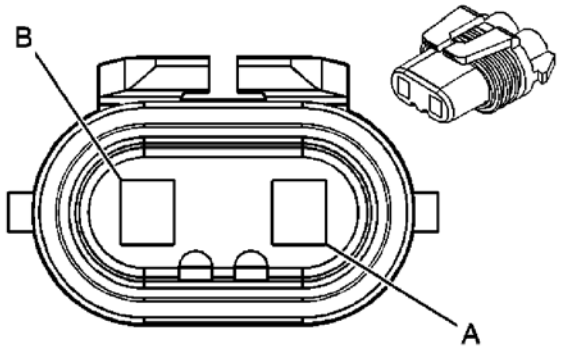
Core/Insulation Crimp: Pins 1, 2 - 2/1

Core/Insulation Crimp: Pins 3 - E/1

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.8 TN/WH | 312 | Left Headlamp Low Beam Control |
| 2 | 1 BK | 250 | Ground (10 Series) |
| | 0.8 BK | 250 | Ground (20 Series) |
| | 0.8 BK | 150 | Ground (HP2) |
| 3 | 0.5 L-GN/BK | 311 | Left Headlamp High Beam Control |

# Forward Lighting - Headlamp - Left High Beam (X88)

**Connector Part Information**




Harness:
Left Headlamp

OEM Connector: 12059183

Service Connector: 12101898

Description: 2-Way F Metri-Pack 280 Series, Sealed (BK)

**Terminal Part Information**

Terminal/Tray: 12077411/2

Core/Insulation Crimp: 2/5

Release Tool/Test Probe: 12094430/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.8 BK | 150 | Ground |
| | 0.8 BK | 150 | Ground |
| B | 1 D-GN/WH | 711 | Left Headlamp High Beam Control |

# Forward Lighting - Headlamp - Left Low Beam (X88)

**Connector Part Information**

Harness:
Left Headlamp

OEM Connector: 12124819

Service Connector: 12085498

Description: 2-Way F Metri-Pack 280 Series, Sealed (BK)

**Terminal Part Information**

Terminal/Tray: Service by Harness - See Part Catalog

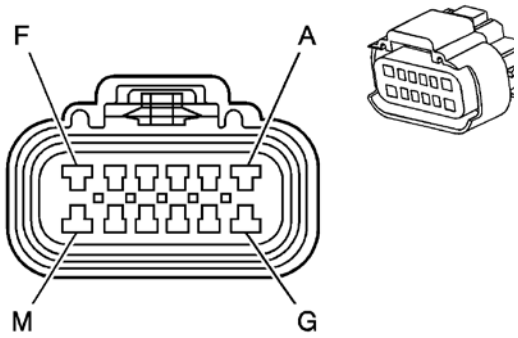
Core/Insulation Crimp: Not Available

Release Tool/Test Probe: Not Available

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.8 BK | 150 | Ground |
| B | 1 YE | 712 | Left Headlamp Low Beam Control |

# Forward Lighting - Headlamp - Right (T4Q)

**Connector Part Information**




Harness:
Forward Lamp

OEM Connector: 15326939

Service Connector: 88988440

Description: 12-Way F GT 150 280 Series, Sealed (BK)

**Terminal Part Information**

Pins: A, F, M, J

Terminated Lead: 13575405

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-4A (PU)

Terminal/Tray: 15304719/19

Core/Insulation Crimp: 2/5

Pins: B-E, L

Terminated Lead: Pins B, D, E - 13575413

Terminated Lead: Pins C - 13327112

Terminated Lead: Pins L - 13327113

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191819/8

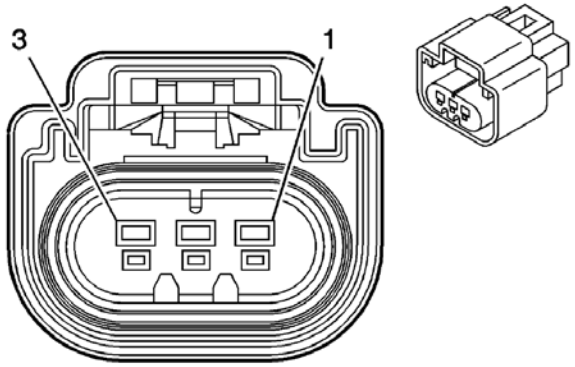
Core/Insulation Crimp: Pins B-E - E/1

Core/Insulation Crimp: Pins L - 2/1

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 1 TN/WH | 312 | Right Headlamp Low Beam Control |
| B | 0.5 L-GN/BK | 592 | DRL Low Control |
| C | 0.35 L-BU | 3203 | Outage Detection Signal |
| D | 0.5 D-BU | 545 | DRL Control |
| E | 0.5 BN | 2609 | Right Front Park Lamp Control |
| F | 1 BK | 250 | Ground |
| G-H | -- | -- | Not Used |
| J | 1 BK | 250 | Ground |
| K | -- | -- | Not Used |
| L | 0.8 L-GN/BK | 311 | Right Headlamp High Beam Control |
| M | 1 BK | 250 | Ground |

# Forward Lighting - Headlamp - Right (Z88)

**Connector Part Information**






Harness:
Forward Lamp

OEM Connector: 13511996

Service Connector: 19149288

Description: 3-Way F GT 150 Series Sealed (GY)

**Terminal Part Information**

Terminated Lead: Pins 1, 2 - 13327113

Terminated Lead: Pins 3 - 13575413

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 12191819/8

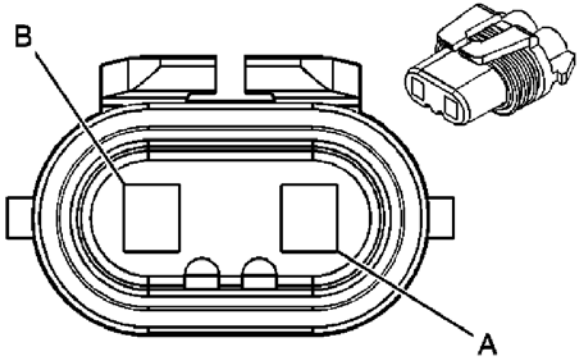
Core/Insulation Crimp: Pins 1, 2 - 2/1

Core/Insulation Crimp: Pins 3 - E/1

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.8 TN/WH | 312 | Right Headlamp Low Beam Control |
| 2 | 0.8 BK | 250 | Ground (20 Series) |
| | 0.8 BK | 150 | Ground (10 Series) |
| 3 | 0.5 L-GN/BK | 311 | Right Headlamp High Beam Control |

# Forward Lighting - Headlamp - Right High Beam (X88)

**Connector Part Information**




Harness:
Right Headlamp

OEM Connector: 12059183

Service Connector: 12101898

Description: 2-Way F Metri-Pack 280 Series, Sealed (BK)

**Terminal Part Information**

Terminal/Tray: 12077411/2

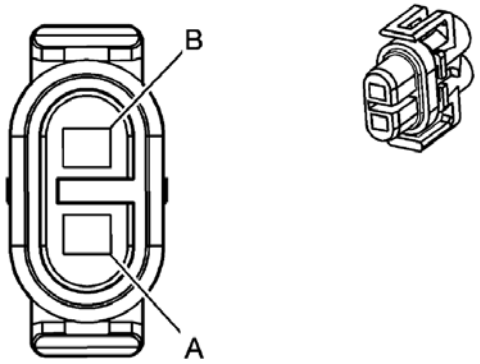
Core/Insulation Crimp: 2/5

Release Tool/Test Probe: 12094430/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.8 BK | 150 | Ground |
| | 0.8 BK | 150 | Ground |
| B | 1 D-GN/WH | 311 | Right Headlamp High Beam Control |

# Forward Lighting - Headlamp - Right Low Beam (X88)

**Connector Part Information**




Harness:
Right Headlamp

OEM Connector: 12124819

Service Connector: 12085498

Description: 2-Way F Metri-Pack 280 Series, Sealed (BK)

**Terminal Part Information**

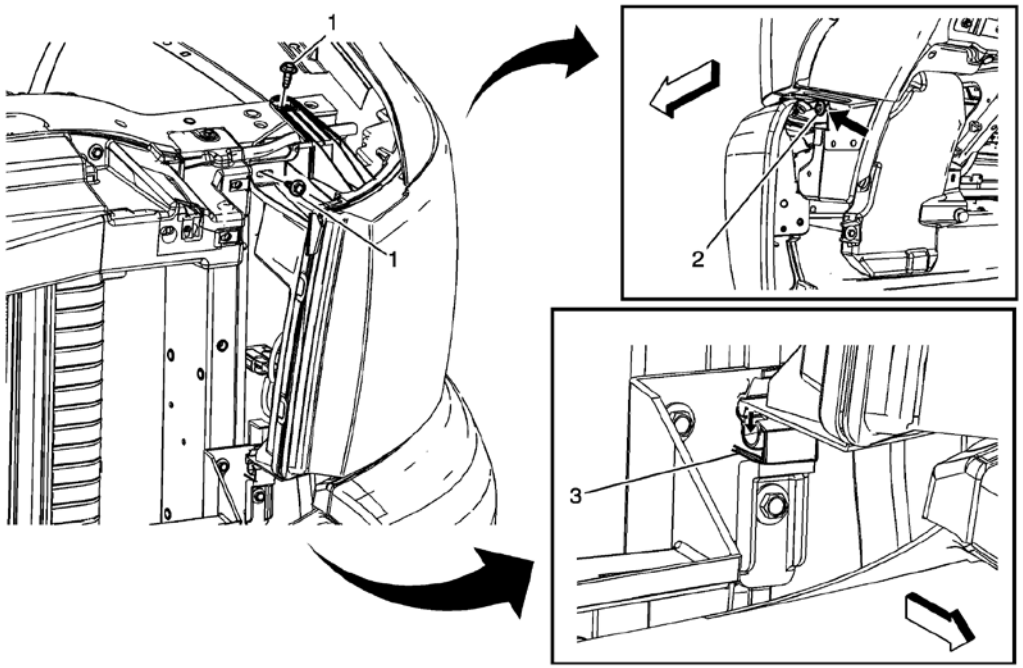
Terminal/Tray: Service by Harness - See Part Catalog

Core/Insulation Crimp: Not Available

Release Tool/Test Probe: Not Available

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.8 BK | 150 | Ground |
| B | 1 YE | 312 | Right Headlamp Low Beam Control |

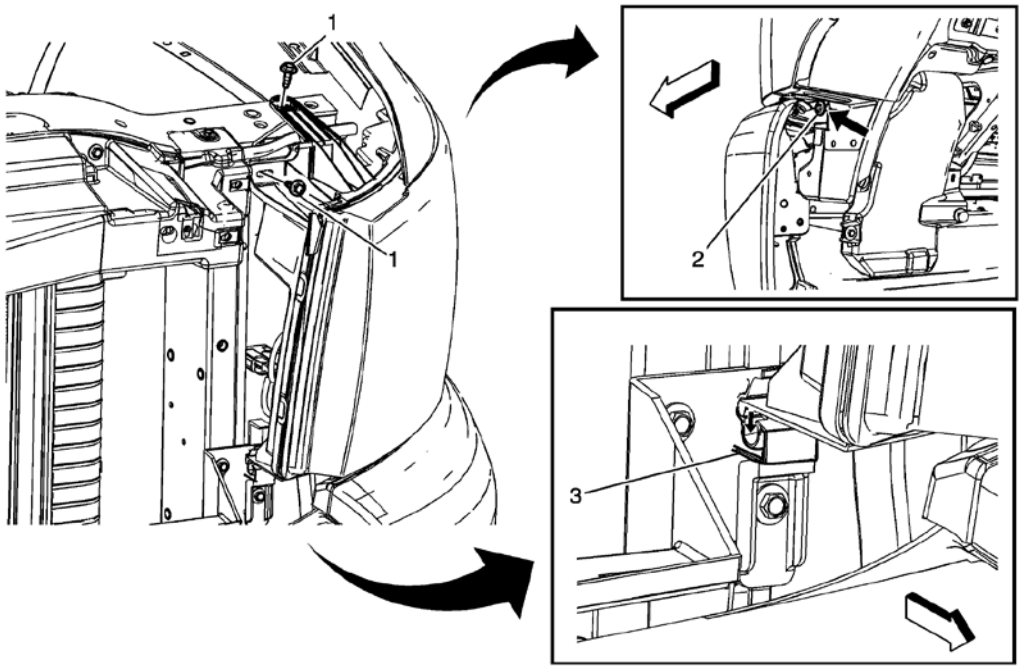
# Forward Lighting - Headlamp Replacement (Chevrolet)




| Preliminary Procedure |
|---|
| 1. Remove the upper radiator grille. Refer to Radiator Grille Replacement.<br>2. Behind the headlamp at the top of the front bumper access the lower inside hidden headlamp bolt.<br>3. Loosen the bolt only, do not remove, the lower outside hidden headlamp bolt<br>. |

| Callout | Component Name/Procedure |
|---|---|
| 1 | Headlamp Screws (Qty: 2)<br>Caution: Refer to Fastener Caution in the Preface section.<br>**Tighten:** 6 N·m (53 lb in) |
| 2 | Headlamp Screw (Hidden)<br>**Tighten:** 6 N·m (53 lb in) |
| 3 | Headlamp Housing Support<br>**Procedure:**<br>1. Apply masking tape to the front bumper end caps to protect the painted surface.<br>2. For the right side lamp assembly only, disengage the upper retainer for the radiator air baffle.<br>3. Release the headlamp from the support tab, rotate the lamp assembly towards the center of the vehicle.<br>4. Disengage the headlamp electrical connector from the forward lamp harness. |

# Forward Lighting - Headlamp Replacement (GMC)

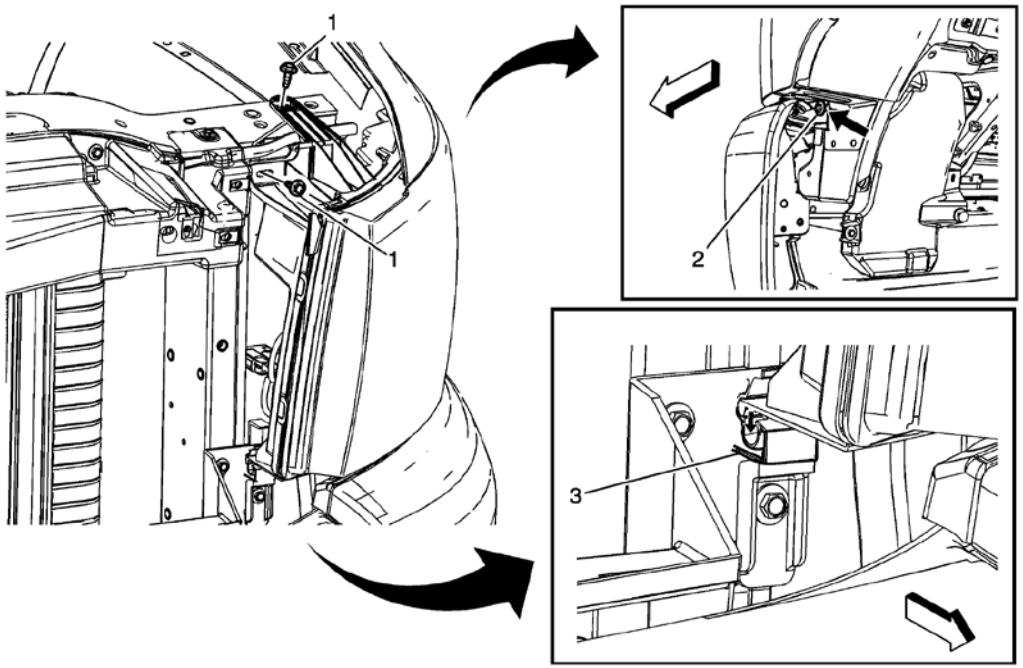



**Preliminary Procedure**

1. Remove either the right front or left front wheelhouse liner. Refer to Front Wheelhouse Liner Replacement - Right Side or Front Wheelhouse Liner Replacement - Left Side.
2. Loosen only, do not remove, the lower outside hidden headlamp bolt (2).
3. Depress the housing support tab with a flat-bladed tool downward in order to release the headlamp assembly from the support.
4. Pull the lamp assembly slightly forward to access the electrical connection.
5. Disconnect the forward lamp harness main electrical connector from the headlamp harness.

| Callout | Component Name/Procedure |
|---|---|
| 1 | Headlamp Screws (Qty: 2)<br>Caution: Refer to Fastener Caution in the Preface section.<br>**Tighten:** 6 N·m (53 lb in) |
| 2 | Headlamp Screw (Hidden)<br>**Tighten:** 6 N·m (53 lb in) |
| 3 | Headlamp Housing Support |

# Forward Lighting - Headlamp Replacement (HD Diesel)

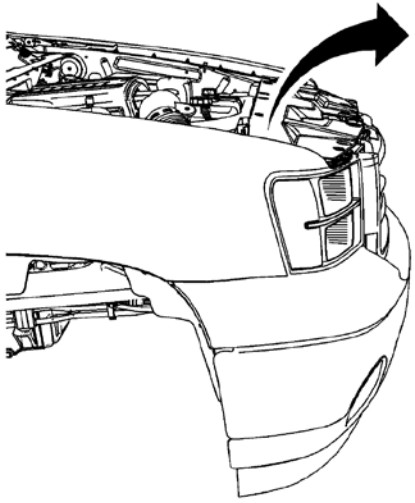


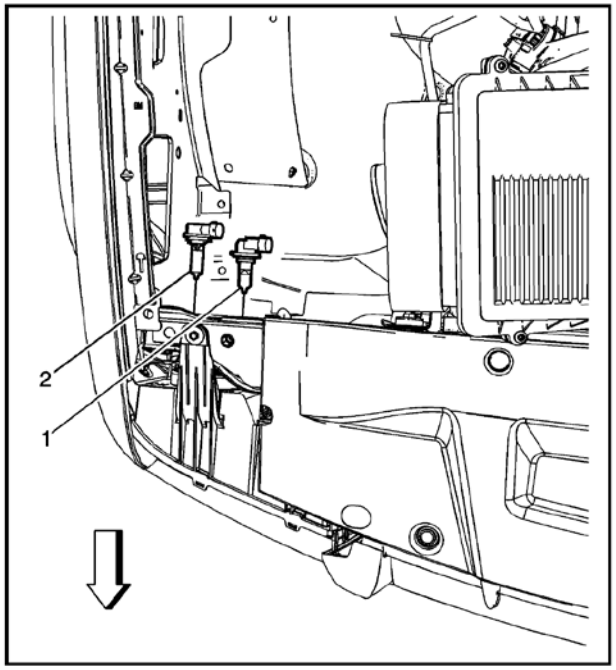

**Preliminary Procedure**

1. Lower the front bumper impact bar. Refer to Front Bumper Impact Bar Replacement.
2. Loosen only, do not remove, the lower outside hidden headlamp bolt (2).
3. Depress the housing support tab with a flat-bladed tool downward in order to release the headlamp assembly from the support.
4. Pull the lamp assembly slightly forward to access the electrical connection.
5. Disconnect the forward lamp harness main electrical connector from the headlamp harness.

| Callout | Component Name/Procedure |
|---|---|
| 1 | Headlamp Screws (Qty: 2)<br>Caution: Refer to Fastener Caution in the Preface section.<br>**Tighten:** 6 N·m (53 lb in) |
| 2 | Headlamp Screw (Hidden)<br>**Tighten:** 6 N·m (53 lb in) |
| 3 | Headlamp Housing Support |

# Forward Lighting - Headlamp Bulb Replacement (Chevrolet)

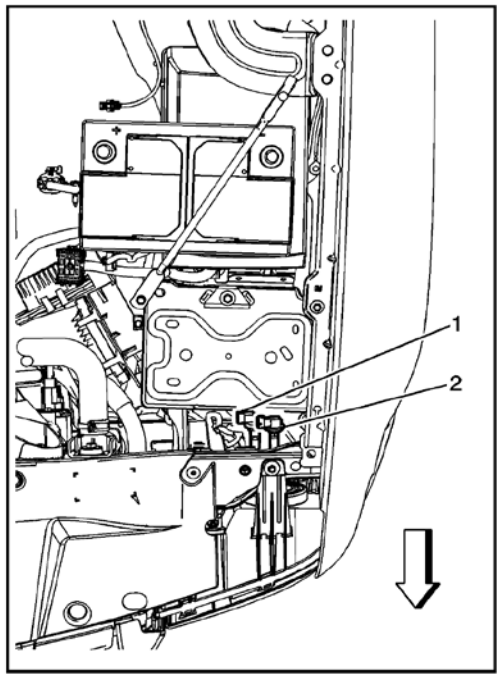


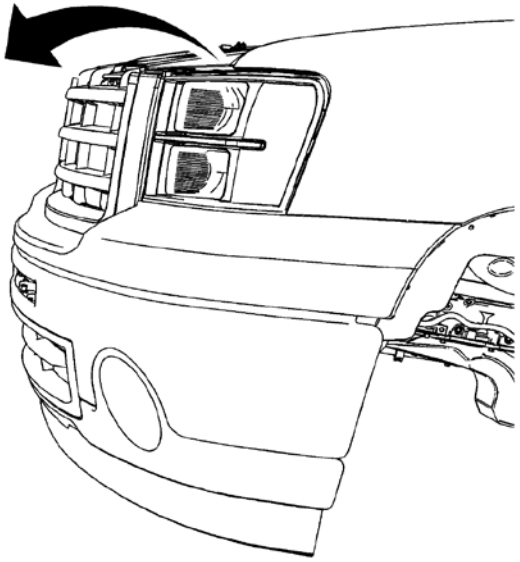



| Preliminary Procedure |
|---|
| 1. Open and support the hood assembly.<br>2. If replacing the headlamp bulbs on the passenger side, remove the air cleaner box assembly. Refer to Air Cleaner Assembly Replacement.<br>3. If replacing the headlamp bulbs on the driver side, remove the auxiliary battery, (if equipped). Refer to Auxiliary Battery Replacement.<br>4. If no auxiliary battery is used, just reach in and access the bulb sockets from inside the engine compartment, disconnect the headlamp bulb electrical connector.<br>5. Rotate the bulb socket counter-clockwise and remove from the headlamp composite. |

| Callout | Component Name/Procedure |
|---|---|
| 1 | Headlamp Bulb (Hi)<br>Warning: Refer to Halogen Bulb Warning in the Preface section.<br>**Tip:** Disconnect the headlamp bulb electrical connector from the headlamp bulb socket assembly. |
| 2 | Headlamp Bulb (Lo)<br>**Tip:** Disconnect the headlamp bulb electrical connector from the headlamp bulb socket assembly. |

# Forward Lighting - Headlamp Bulb Replacement (GMC)



| Preliminary Procedure |
|---|
| 1. Open and support the hood assembly.<br>2. If replacing the headlamp bulbs on the passenger side, remove the air cleaner box assembly. Refer to Air Cleaner Assembly Replacement.<br>3. If replacing the headlamp bulbs on the driver side, remove the auxiliary battery, (if equipped). Refer to Auxiliary Battery Replacement.<br>4. If no auxiliary battery is used, just reach in and access the bulb sockets from inside the engine compartment, disconnect the headlamp bulb electrical connector.<br>5. Rotate the bulb socket counter-clockwise and remove from the headlamp composite. |

| Callout | Component Name/Procedure |
|---|---|
| 1 | Headlamp Bulb (Hi)<br>Warning: Refer to Halogen Bulb Warning in the Preface section.<br>**Tip:** Disconnect the headlamp bulb electrical connector from the headlamp bulb socket assembly. |
| 2 | Headlamp Bulb (Lo)<br>**Tip:** Disconnect the headlamp bulb electrical connector from the headlamp bulb socket assembly. |

## Bulb Replacement

| Replacement Bulbs Chevrolet Silverado | |
|---|---|
| **Exterior Lamp** | **Bulb Number** |
| Back-up Lamp | 921LL |
| Back-up Lamp* | 1156 |
| Cargo Lamp and Center High-Mounted Stoplamp (CHMSL) | 912LL |
| Fender Marker Lamp (If Equipped) | W5WLL |
| High-Beam Headlamp | 9005 |
| Low-Beam Headlamp | H11 |
| License Plate Lamp | 168 |
| Sidemarker Lamp/Stoplamp/Taillamp/Turn Signal Lamp | 3047K |
| Stoplamp/Turn Signal Lamp/Taillamp* | 1157 |
| * Chassis Cab Models | |

| Replacement Bulbs GMC Sierra | |
|---|---|
| **Exterior Lamp** | **Bulb Number** |
| Back-up Lamp | 921 |
| Back-up Lamp* | 1156 |
| Cargo Lamp and Center High-Mounted Stoplamp (CHMSL) | 912 |
| Fender Marker | W5WLL |
| High-Beam Headlamp | 9005 |
| Low-Beam Headlamp | H11 |
| License Plate Lamp | 168 |
| Stoplamp/Taillamp/Turn Signal Lamp | 3047K |
| Sidemarker Lamp | 194 |
| Stoplamp/Turn Signal Lamp/Taillamp* | 1157 |
| * Chassis Cab Models | |

| Replacement Bulbs Chevrolet Tahoe/Suburban | |
|---|---|
| If the vehicle is a hybrid, see the hybrid supplement for more information. | |
| **Exterior Lamp** | **Bulb Number** |
| Back-up Lamp | 7441 |
| License Plate Lamp | W5WLL |
| Rear Turn Signal Lamp, Taillamp, and Stoplamp | 3057K |
| Side Marker Lamp | 194 |

| Replacement Bulbs Yukon | |
|---|---|
| If the vehicle is a hybrid, see the hybrid supplement for more information. | |
| **Exterior Lamp** | **Bulb Number** |
| Back-up Lamp | 7441 |
| License Plate Lamp | W5WLL |
| Rear Turn Signal Lamp, Taillamp, and Stoplamp | 7443 |

For replacement bulbs not listed here, contact your dealer.

## Rearward Lighting - Separate Stop and Turn Signals

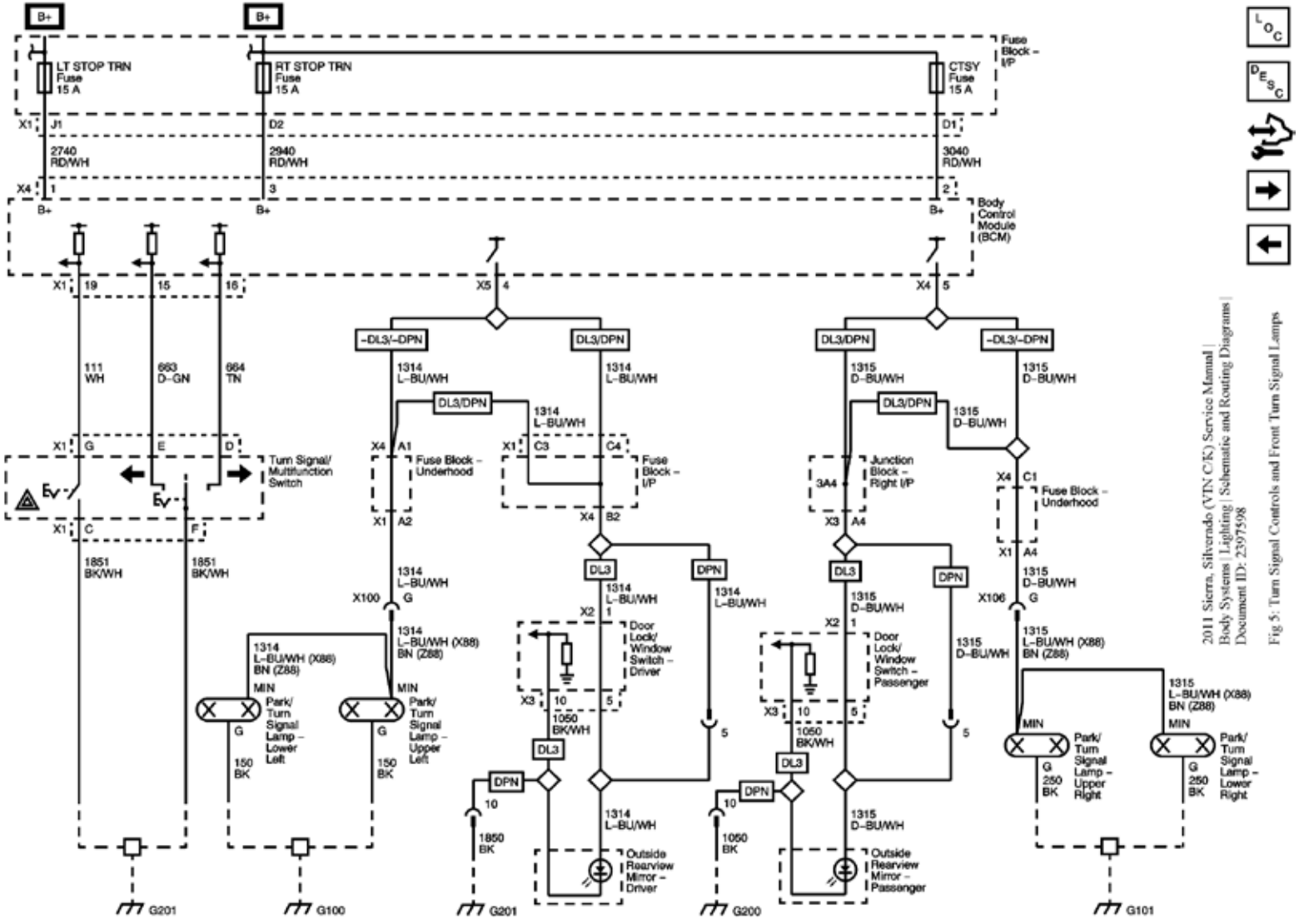
1. Before you start, disconnect the rear chassis lighting connector and select L or R turn signal with the key on. If it fast flashes you will need to assure your BCM is programmed for ZW9 LED compatible rear lamps so the removal of the rear circuit loads will not result in fast flashing. See UI Bulletin 81. If you don't want to reprogram you will need to use ballast resistors in place of the rear turn/stop lamps and run new wires for left, right and stop rear lights.
2. Locate the orange blunt cut wire under the LH dash panel [see: BBM Installing Electric Trailer Brake Controller Wiring.] See the Stop Signal Controls and CHMSL Schematic on the following page.
3. For the LH rear turn signal, cut the Yellow 18 circuit in the BCM connector X5 cavity 1 and splice the harness lead to the light blue white 1314 circuit in the BCM connector X5 cavity 4. See attached schematics Turn Signal Controls and Front Turn Lamp, and Rear Stop Turn Signal Lamps, for details.
4. For the RH rear turn signal, cut the Dark Green 19 circuit in the BCM connector X5 cavity 2 and splice the harness lead to the dark blue white 1315 circuit in the BCM connector X4 cavity 5.
5. The current limit is 6A. If your lamps require more current you must use a relay energized by the front turn signal circuits and switch battery power directly to the rear lamps.



*(continued on next page)*

## Rearward Lighting - Separate Stop and Turn Signals (cont'd)

**Turn Signal Controls and Front Turn Lamp**




2011 Sierra, Silverado (VIN C/K) Service Manual | Body Systems | Lighting | Schematic and Routing Diagrams | Document ID: 2397598

Fig. 5: Turn Signal Controls and Front Turn Signal Lamps



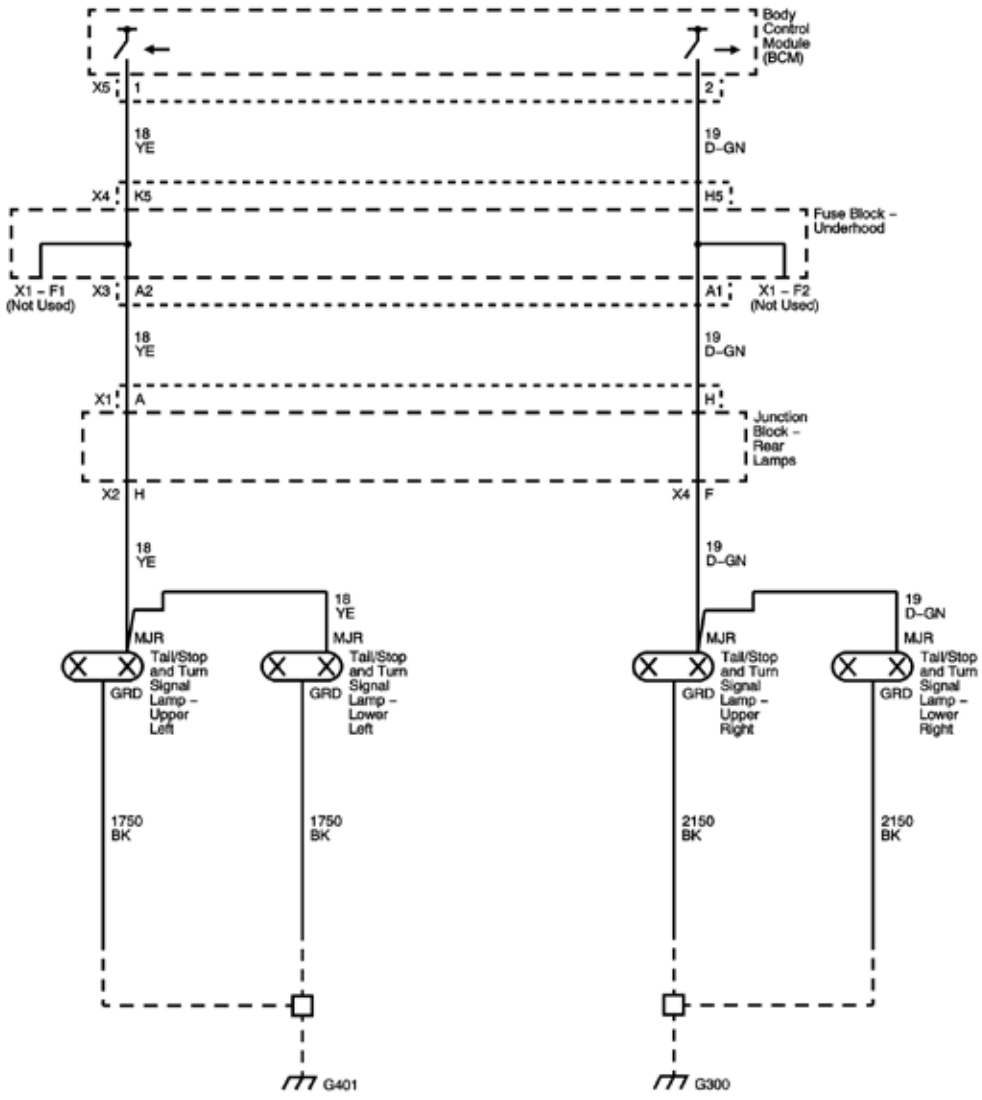
*(continued on next page)*

## Rearward Lighting - Separate Stop and Turn Signals (cont'd)

### Rear Stop Turn Signal Lamps Schematic

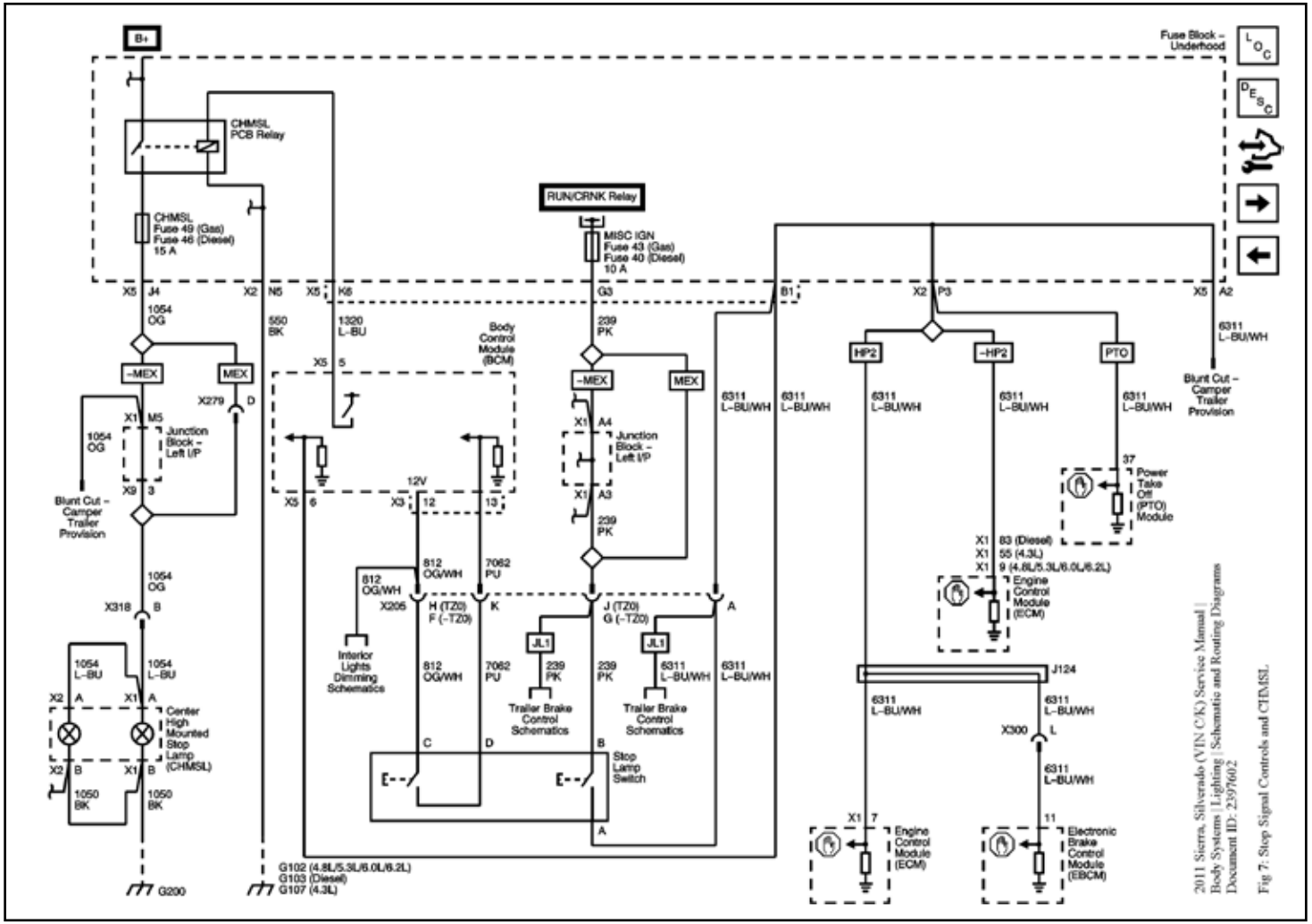
2011 Sierra, Silverado (VIN C/K) Service Manual | Body Systems | Lighting | Schematic and Routing Diagrams | Document ID: 2397599

Fig 6: Rear Stop/Turn Signal Lamps



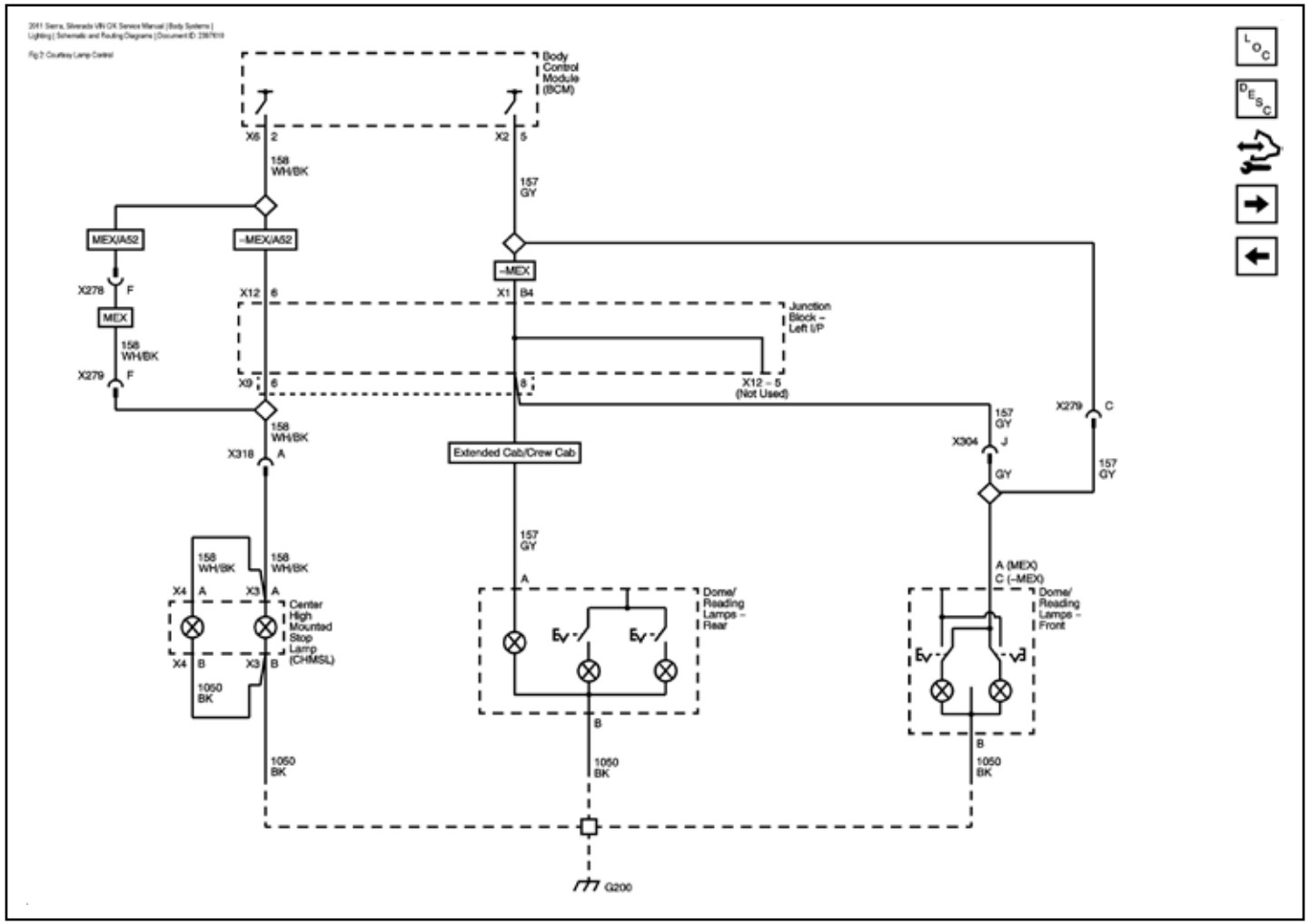
## Rearward Lighting - CHMSL

Locate the orange blunt cut wire under the LH dash panel [see: BBM Installing Electric Trailer Brake Controller Wiring.] See the Stop Signal Controls and CHMSL Schematic below.


B+
Fuse Block – Underhood
CHMSL PCB Relay
CHMSL Fuse 49 (Gas) Fuse 46 (Diesel) 15 A
RUN/CRNK Relay
MISC IGN Fuse 43 (Gas) Fuse 40 (Diesel) 10 A
Body Control Module (BCM)
Junction Block – Left I/P
Blunt Cut – Camper Trailer Provision
Center High Mounted Stop Lamp (CHMSL)
Interior Lights Dimming Schematics
Trailer Brake Control Schematics
Stop Lamp Switch
Power Take Off (PTO) Module
Engine Control Module (ECM)
Electronic Brake Control Module (EBCM)
G102 (4.8L/5.3L/6.0L/6.2L)
G103 (Diesel)
G107 (4.3L)
G200
2011 Sierra, Silverado (VIN C/K) Service Manual
Body Systems | Lighting | Schematic and Routing Diagrams
Document ID: 2597602
Fig 7: Stop Signal Controls and CHMSL

## Dome Lamp

A control signal for additional dome lamps (courtesy lamps) can be accessed junction block left IP X12 cavity 5 see electrical center identification views. A pin can be added to this connector to pick up the signal. See the Courtesy Lamp Control Schematic.



## Snow Plow Prep Package (VYU) Electrical Provisions

**Emergency Roof-Mounted Lamp Switch**
This provision includes an over head console mounted switch , a relay, and wiring which terminates at the roof as coiled blunt cut wires – Option TRW. There are two blunt cut 12-gauge (3.0 mm2) wires, one is Dark Green (roof-mounted lamp power), it is controlled by the over head console -mounted switch through the relay, the other is Black (ground). The Dark Green power wire is protected by the 30-Amp S/ROOF fuse #33 which is located in the Underhood Electrical Center.

**VYU Generators**
- On 1500/2500 Series trucks equipped with Gas Engines, the VYU option provides upgrade to a larger 160 amp output generator
- On 2500/3500 Series trucks equipped with Diesel Engines, the VYU option provides upgrade to dual 125 amp generators
- Refer to the Generator Chart on page A-18

**Accessory Harness Grommet**
Trucks will come equipped with a predrilled 42mm pass-through hole located on the dash panel on the left hand side of the vehicle. The hole will be sealed with a grommet (see Figure 3) which can be used by the upfitter for pass-through wiring. To use the grommet (part# 15336702), the upfitter slices off the tape tab end (in engine compartment) of the grommet and then spreads it open to pass wiring through.

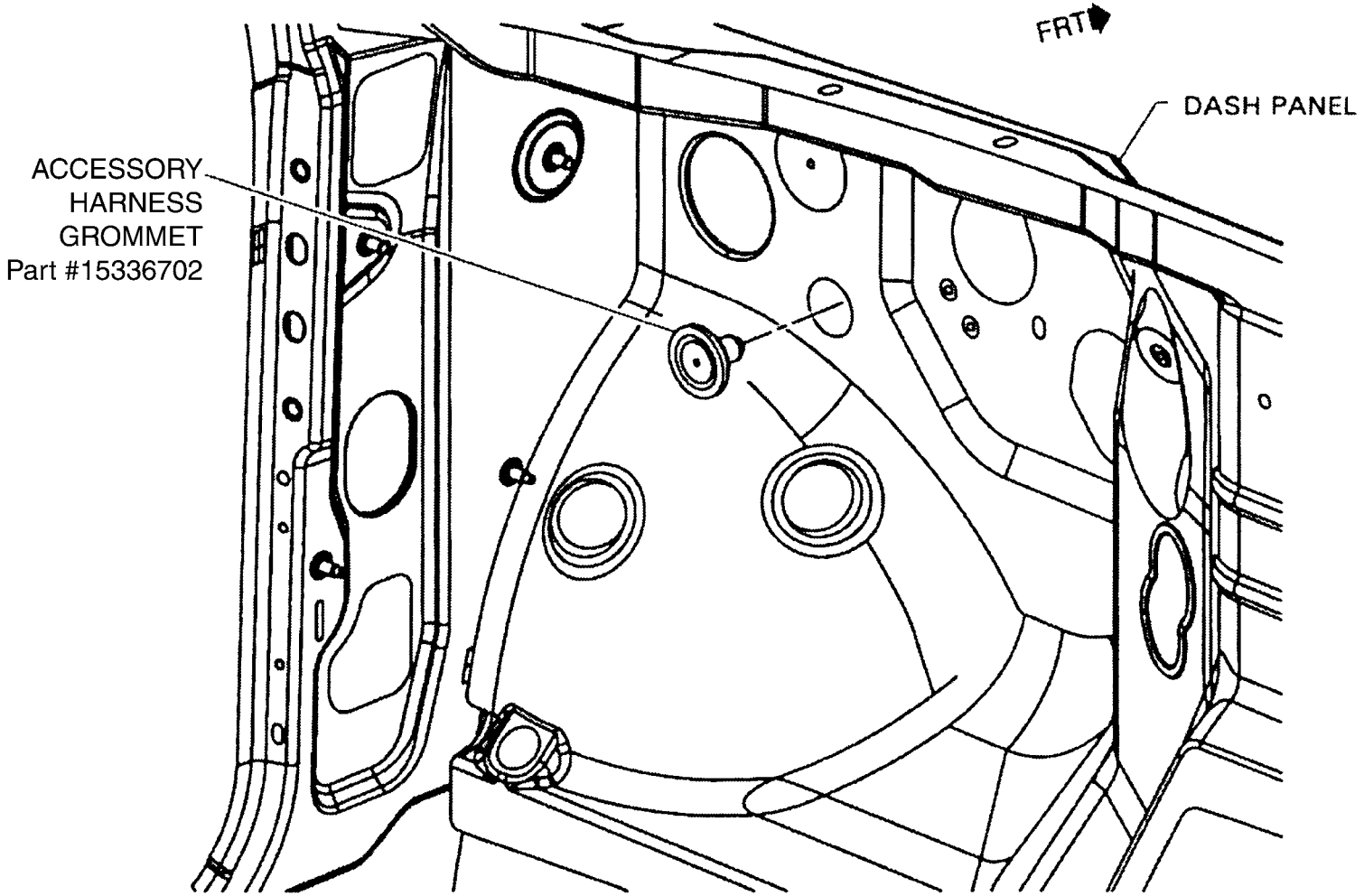
**Forward Lamp Harness In-Line Connectors**
The turn signals are driven from the BCM. Changes in turn signal current may require the use of additional relays. The Studs on the UBEC can be used for battery power for the relays. This wire requires a separate in-line fuse.

The Chevrolet (X88) and GMC (Z88) utilities have different forward lamps.
- Chevrolet forward lamp wiring harness will have a set of mating eight cavity connectors on both the left and right hand side of the vehicle The upfitter will be able to disconnect the in-line connectors which will allow interfacing with the forward lamp circuits (Front Parklamp, Turn Signal and DRL). The headlamp circuits may be accessed from the headlamp connectors.
- GMC lamp wiring harness will have a set of mating 3 cavity connectors on both the left and right hand side of the vehicle for Turn Signal and Park Lamps. High and Low beams do not have an in-line connector. The VYU options adds an additional set of mating 3 cavity connectors on both the left and right hand side of the vehicle for High and Low beams.

The Chevrolet (X88) and GMC (Z88) pickups have the same forward lamps.
- These are similar to the Chevrolet utility. The difference is the utilities have a separate Daytime Running Lamp (DRL). The Pickups use a reduced intensity Low Beam Headlamp for DRL. Both the pickups and the Chevrolet utility use the same eight cavity connectors for the forward lamp wiring. The difference is the pickups have no connection for the DRL.

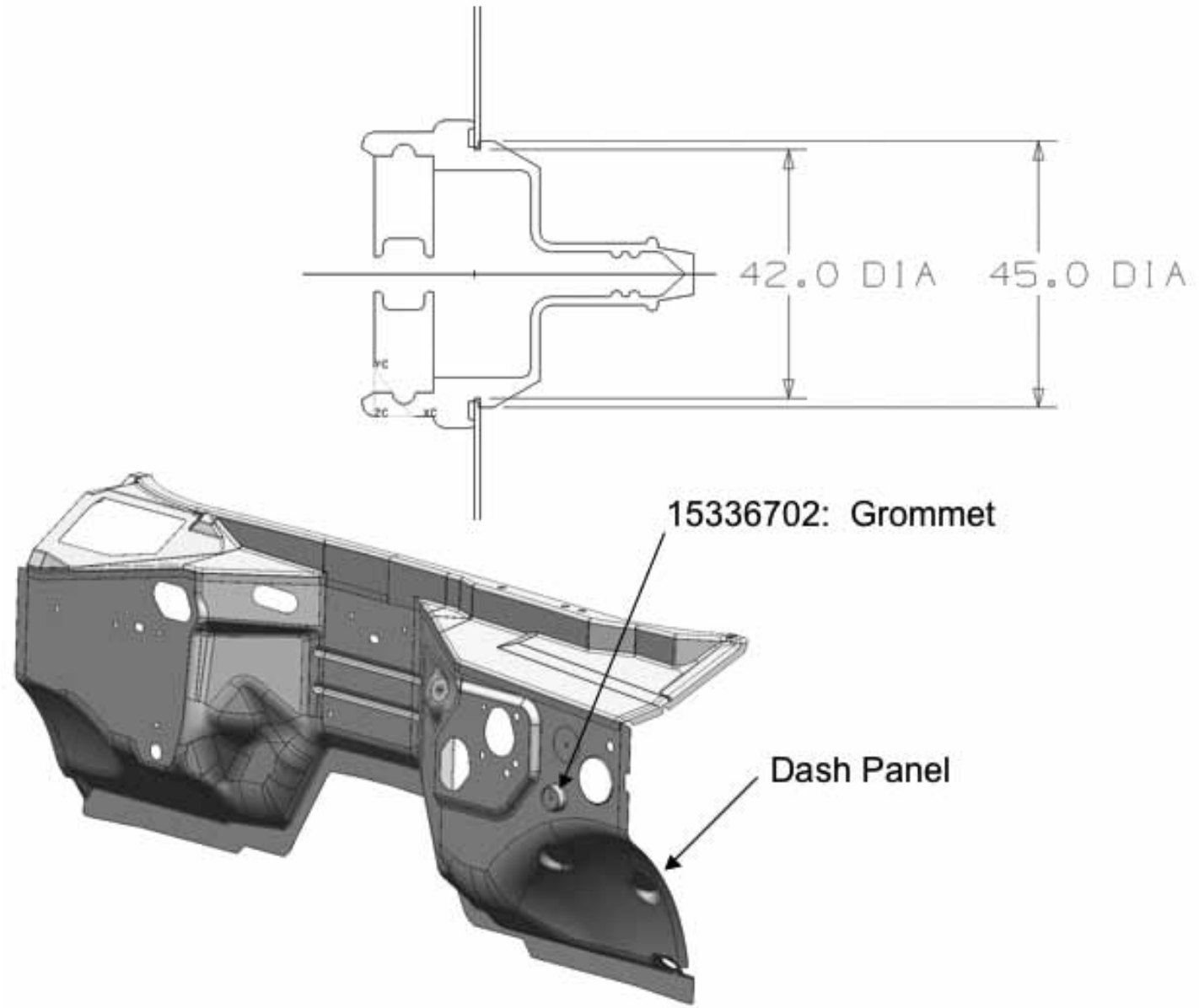
**Backup Lamp Power Feed**
A backup lamp power feed is provided at the rear of the vehicle through the trailer wiring harness as a standard feature. This circuit is protected by the 10-Amp TRLR B/U fuse which is located in the Under hood Electrical Center. On vehicles with Light Duty Trailer Wiring this circuit can be accessed through the Light Green trailer wire. This wire is located in pin A of the trailer connector at the rear of the vehicle (see figure 6). On vehicles with Heavy Duty Trailer Wiring option, this connector is mated with a socket at the rear of the vehicle (see figure 7).

## *Acessory Harness Grommet*




**ACCESSORY HARNESS GROMMET**

## VYU Hole Location



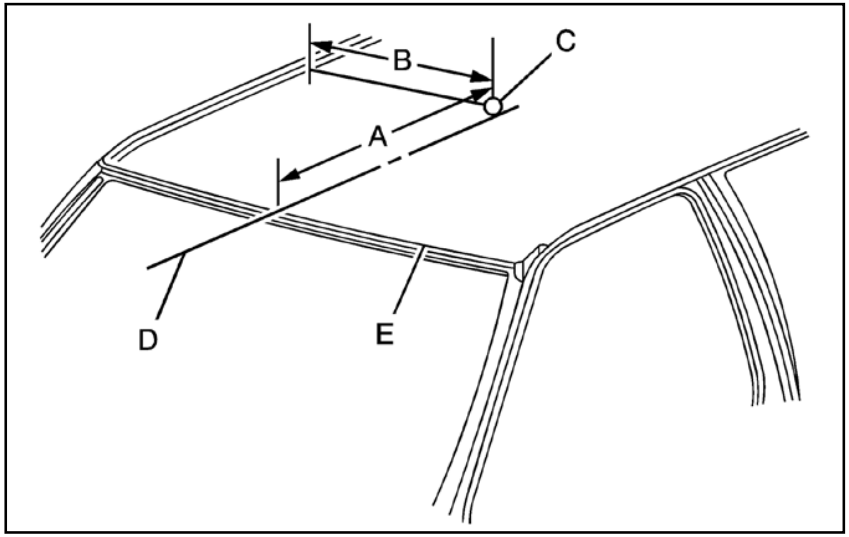
## Roof Mounted Beacon (TRW)

Battery power is supplied through the sunroof 30 amp fuse to a wiring harness located in the roof. Power is controlled with a switch located in the overhead console. The customer or vehicle upfitter must complete the installation by first connecting the switch (switch not connected at the factory) and routing the blunt cut wires out to an added accessory such as an emergency beacon lamp.

Maximum rated electrical load is 21 amps (250 watts). The added electrical requirements must not exceed 21 amps (250 watts). Running the accessory for long periods of time with the engine off may run the battery down.

**Installation Instructions — Emergency Vehicle Roof Panel Lamp**

Wiring to the accessory can be done by either directly connecting the wire in the roof to the accessory (Option A) or by using Wiring Harness Package part number 12150250 obtained from GM Service Parts (Option B).




A. 25.39 inches (645 mm)
B. 17.32 inches (440 mm)
C. 3.94 inches (100 mm)
D. Roof Centerline
E. Roof Edge

*(continued on next page)*

## Roof Mounted Beacon (TRW) (cont'd)

***Emergency Vehicle Roof Panel Lamp***
***(continued from previous page)***

1. Remove sunroof 30A fuse.
2. Make the electrical connections using either option A or option B.

**Notice:** Pulling the wiring harness through a panel hole that has sharp edges may cause damage to the wire and/or wire insulation. Remove sharp edges from the panel hole before pulling the wire through it.

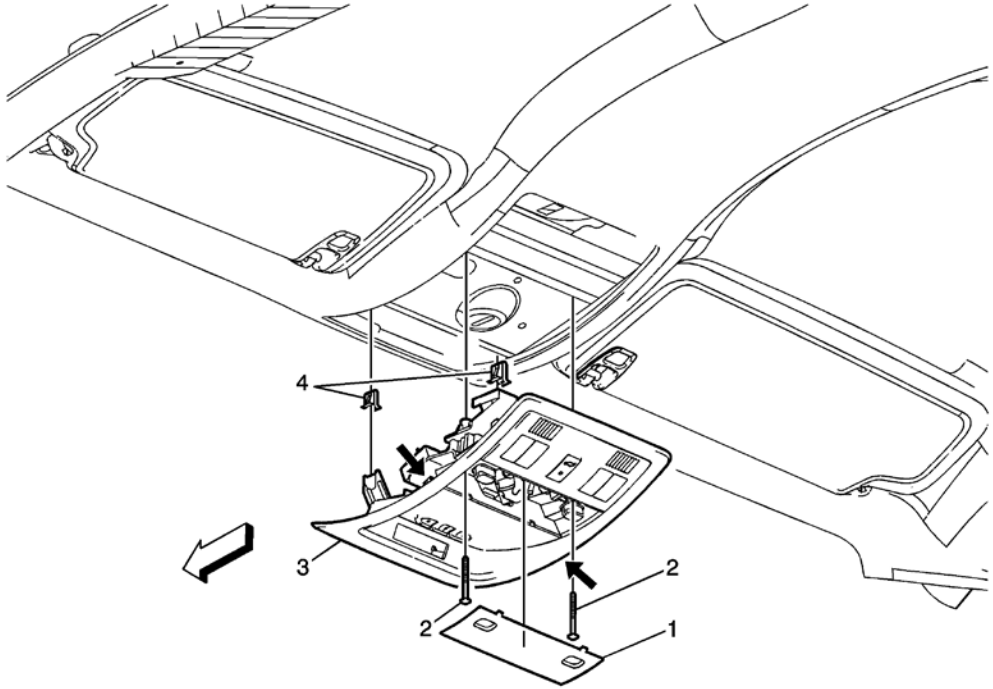
**Option A: Roof Wires Directly to Accessory**

1. Remove the overhead console (see procedure).
2. Drill a 3/8 inch to 1/2 inch (10 to 13 mm) hole in the outer roof panel in the area shown in the illustration. The hole should only go through the outer panel. Remove all sharp edges from the drilled hole.
3. The accessory harness is coil tied to the passenger's side of the vehicle at the console inner bracket.
4. Cut the tape holding the harness coil.
5. As one person watches the roof hole from the outside for the end of the harness, a second person from the inside of the vehicle should snake the harness toward the hole.
6. Pull out the wiring harness being careful to avoid scraping the insulation on the edge of the hole.
7. Extend the wiring harness to the accessory.
8. Connect the dark green wire to the accessory hot terminal.
9. Connect the black wire to the accessory ground terminal.
10. Cover the hole in the roof with durable sealant such as silicone rubber sealer.
11. Install the harness connector to the Roof Beacon switch (not connected at the factory to prevent accidental battery run down).
12. Reinstall the overhead console access panel/lamp lenses.

**Option B: Use Wiring Harness Package 12150250.**
**Obtain from GM Service Parts through the GM Dealership**

1. Remove the overhead console (see procedure).
2. Drill a 1.25 inch (32 mm) hole in the outer roof panel in the area shown in the illustration. The hole should only go through the outer panel. Remove all sharp edges from the drilled hole.
3. The accessory harness is coil tied to the passenger's side of the vehicle at the console inner bracket.
4. Cut the tape holding the harness coil.
5. As one person watches the roof hole from the outside for the end of the harness, a second person from the inside of the vehicle should snake the harness toward the hole.
6. Pull out the wiring harness being careful to avoid scraping the insulation on the edge of the hole.
7. Cut the wire to length. Install terminals to wire ends and insert into the connector. The brown wire goes to cavity A and the black wire in cavity B. Push in the secondary lock to retain the wires.
8. Attach the harness assembly from the package to the accessory. Cover with the supplied conduit for added protection. Connect the orange wire to the accessory hot terminal and the black wire to the ground.
9. Complete the connection from the roof harness to the extension harness. Cover the mated connector with the supplied foam. Push the foam covered connection and excess wire through the roof panel hole.
10. Install the harness connector to the Roof Beacon switch (not connected at the factory to prevent accidental battery run down).
11. Reinstall the overhead console access panel/lamp lenses.

# Roof Console Replacement




(1) Roof Console Dome and Reading Lamp Lens

(2) Roof Console Screw (Qty: 2)

**Caution:** Use the correct fastener in the correct location. Replacement fasteners must be the correct part number for that application. Do not use paints, lubricants, or corrosion inhibitors on fasteners, or fastener joint surfaces, unless specified. These coatings affect fastener torque and joint clamping force and may damage the fastener. Use the correct tightening sequence and specifications when installing fasteners in order to avoid damage to parts and systems. When using fasteners that are threaded directly into plastic, use extreme care not to strip the mating plastic part(s). Use hand tools only, and do not use any kind of impact or power tools. Fastener should be hand tightened, fully seated, and not stripped.

**Tighten** 2 N·m (18 lb in)

(3) Roof Console Assembly

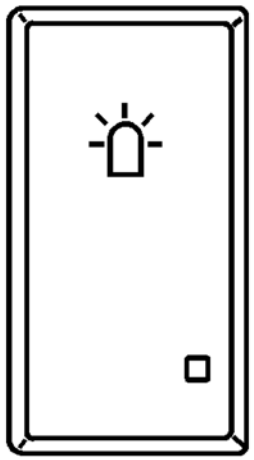
**Caution:** Do not exert downward force at the forward or rearward edge of the roof console assembly as irreversible damage will occur.

**Procedures**

1. Grasp the right and left sides of the roof console assembly where indicated with arrows and pull downward using equal force on each side in order to release the retainer clips securing the overhead console assembly to the headlining assembly.
2. Disconnect the electrical connectors.
3. If replacing roof console assembly, transfer all necessary components.

(4) Roof Console Retainers (Qty: 2)

## Roof Mounted Beacon (TRW) – Restoring Power



The Roof Beacon switch is located on the overhead console.

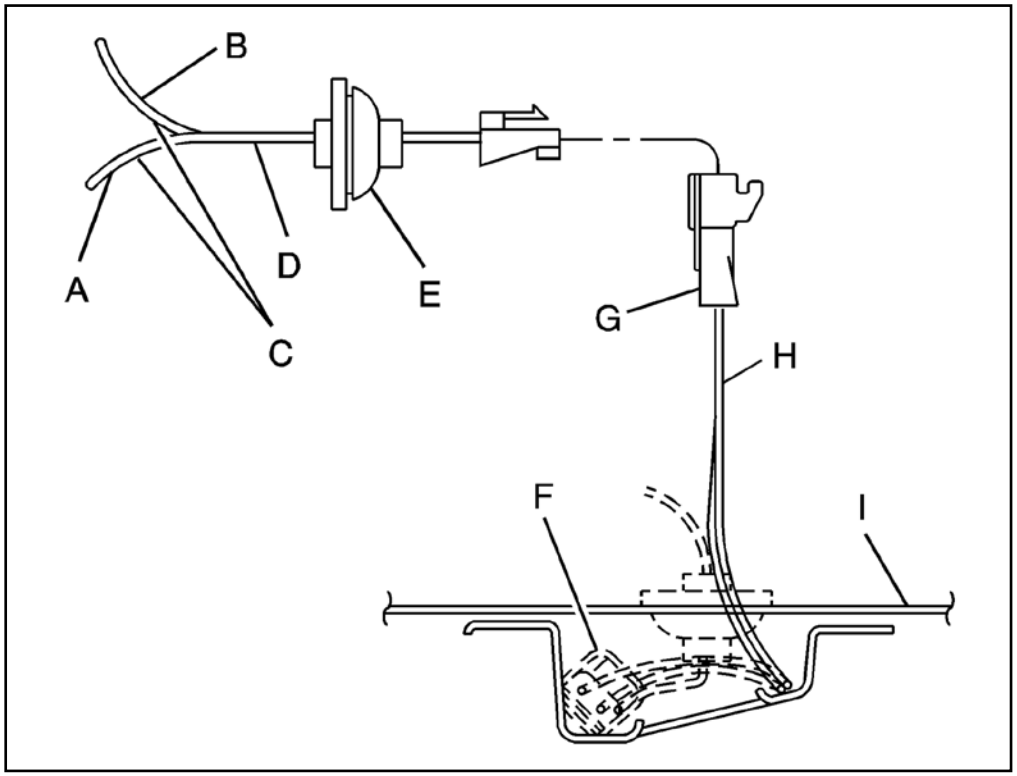
This switch includes wiring provisions for a dealer or a qualified service center to install an auxiliary roof lamp or beacon. When the wiring is connected to the roof mounted lamp, pressing the bottom of the switch will activate the lamp and illuminate an indicator light at the bottom of the switch. Pressing the top of the switch again will turn off the roof mounted lamp and indicator.

1. Be sure that the Roof Beacon switch is off.
2. Insert the sunroof 30A fuse to its proper position.
3. Turn the Roof Beacon switch on. The accessory should now be working. If it is not working, check the connections.
4. After ensuring that the accessory is working properly, install the grommet in the hole. Seal with silicone sealer to prevent water leakage.

**Notice:** Overloading the vehicle's electrical system may damage your vehicle's accessories.
Do not overload the vehicle's system by having unnecessary accessories on at the same time.

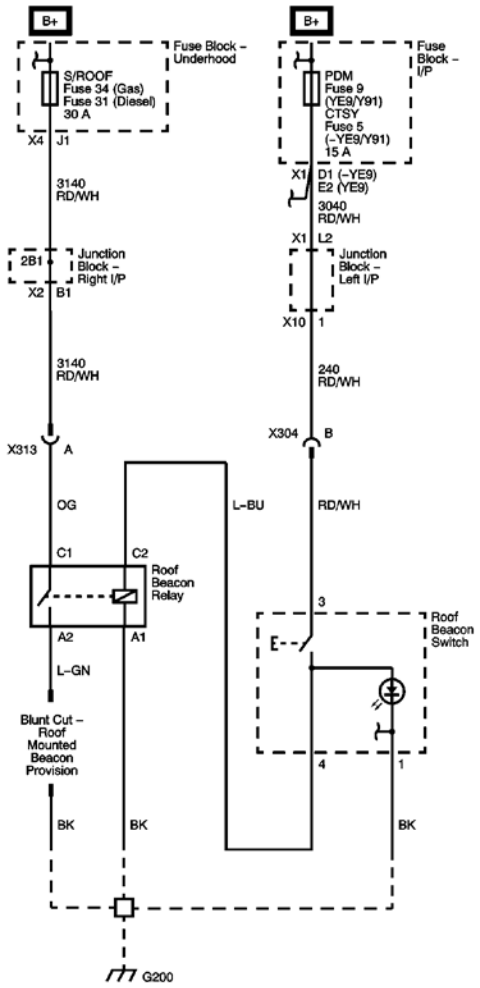
## Roof Mounted Beacon (TRW)

**Option B**




A. Black Wire
B. Orange Wire
C. To Roof Mounted Lamp
D. Harness Assembly
E. Grommet (Roof)
F. Foam Insulator (Adhesive-Backed)
G. Harness Connector, Secondary Lock and Terminal
H Brown Black Wire
I. Vehicle Outer Roof Panel

## Roof Mounted Beacon (TRW)



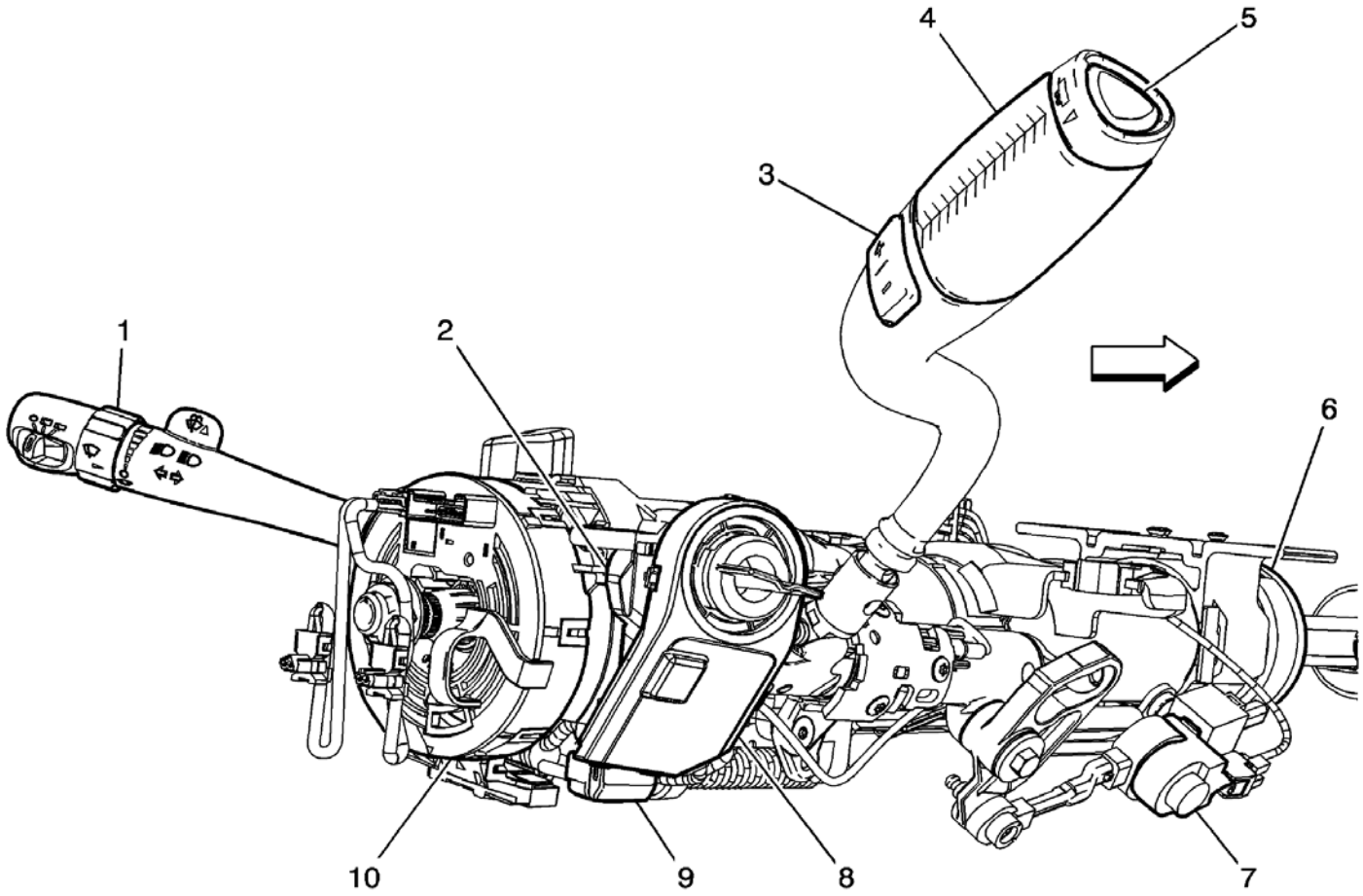

2010 Sierra, Silverado VIN C/K Service Manual | Power and Signal Distribution | Wiring Systems and Power Management | Schematic and Routing Diagrams | Upfitter Provision Schematics |
Document ID 2228842

Roof Beacon Wiring (TRW)

## Maintenance

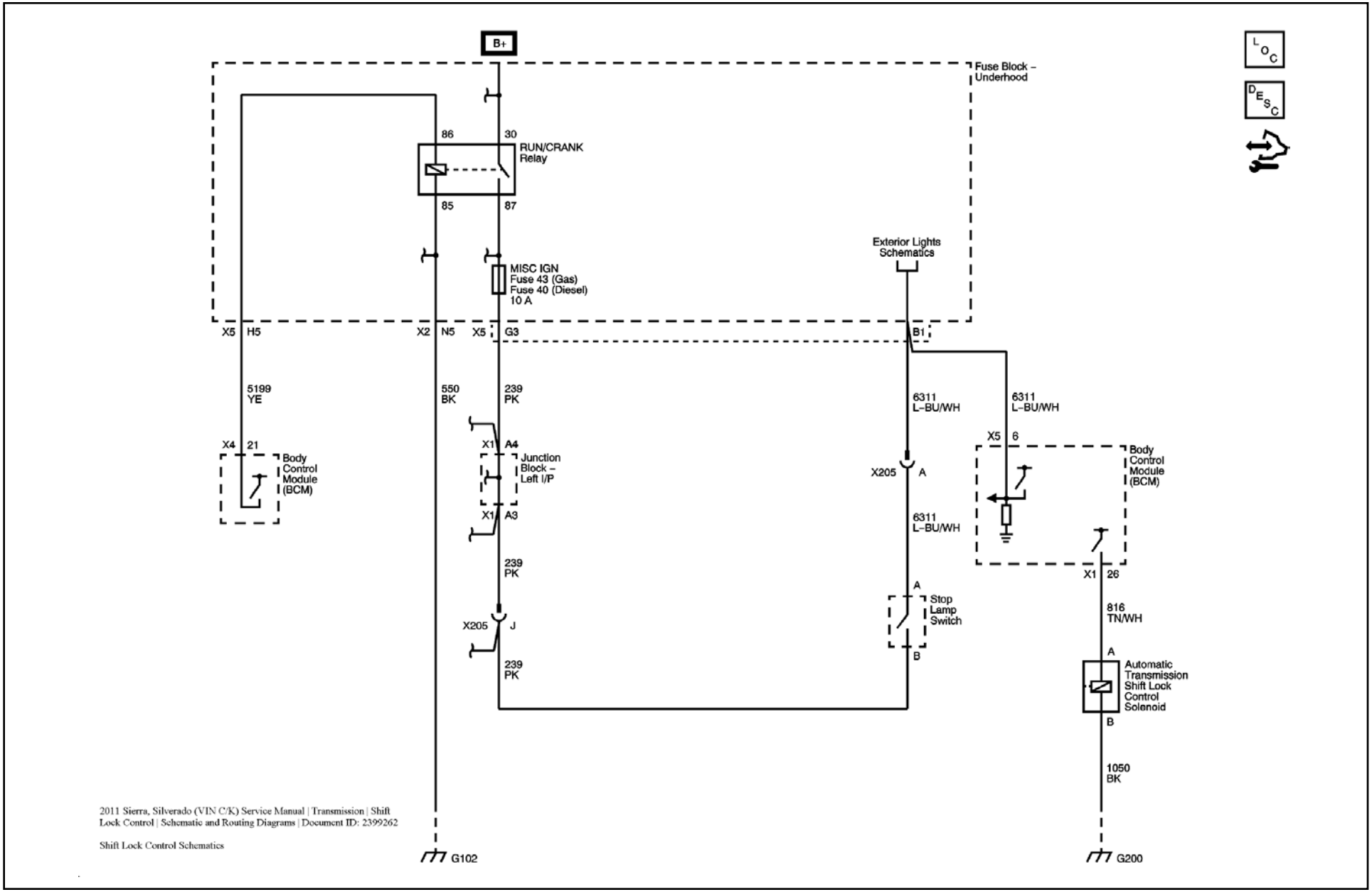
The circuit is fed from the #2 post on the underhood electrical center and protected by the fuse labeled #2 post located in the electrical center. Always replace the fuse with a 30 amp maxi-fuse.

## Park Neutral Signal - Steering Column Components




(1) Turn/Signal Multifunction Switch
(2) Ignition Lock Cylinder
(3) Driver Shift Request Switch (MYC/MYD/MW7)
(4) Automatic Transmission Shift Lever (M30/MYC/MYD/MW7)
(5) Tow/Haul Switch (M30/MYC/MYD/MW7)
(6) Steering Angle Sensor (JL4)
(7) Automatic Transmission Shift Lock Control Solenoid
(8) Theft Deterrent Module (TDM)
(9) Ignition Switch
(10) Inflatable Restraint Steering Wheel Module Coil

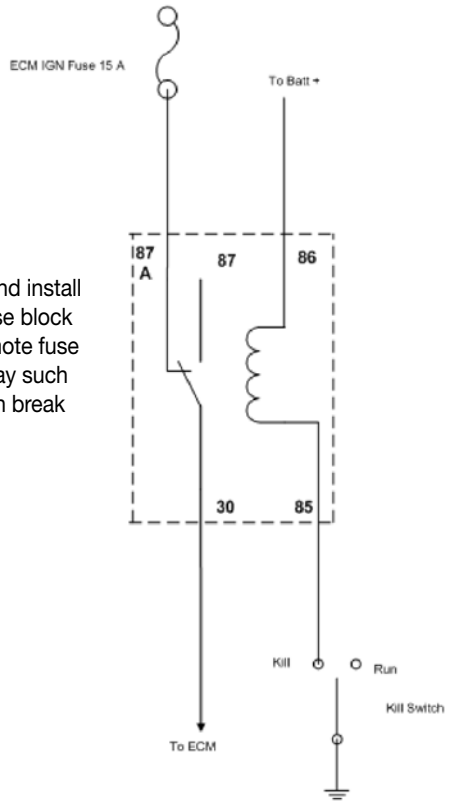
## Park Neutral Signal - Shift Lock Control Schematic

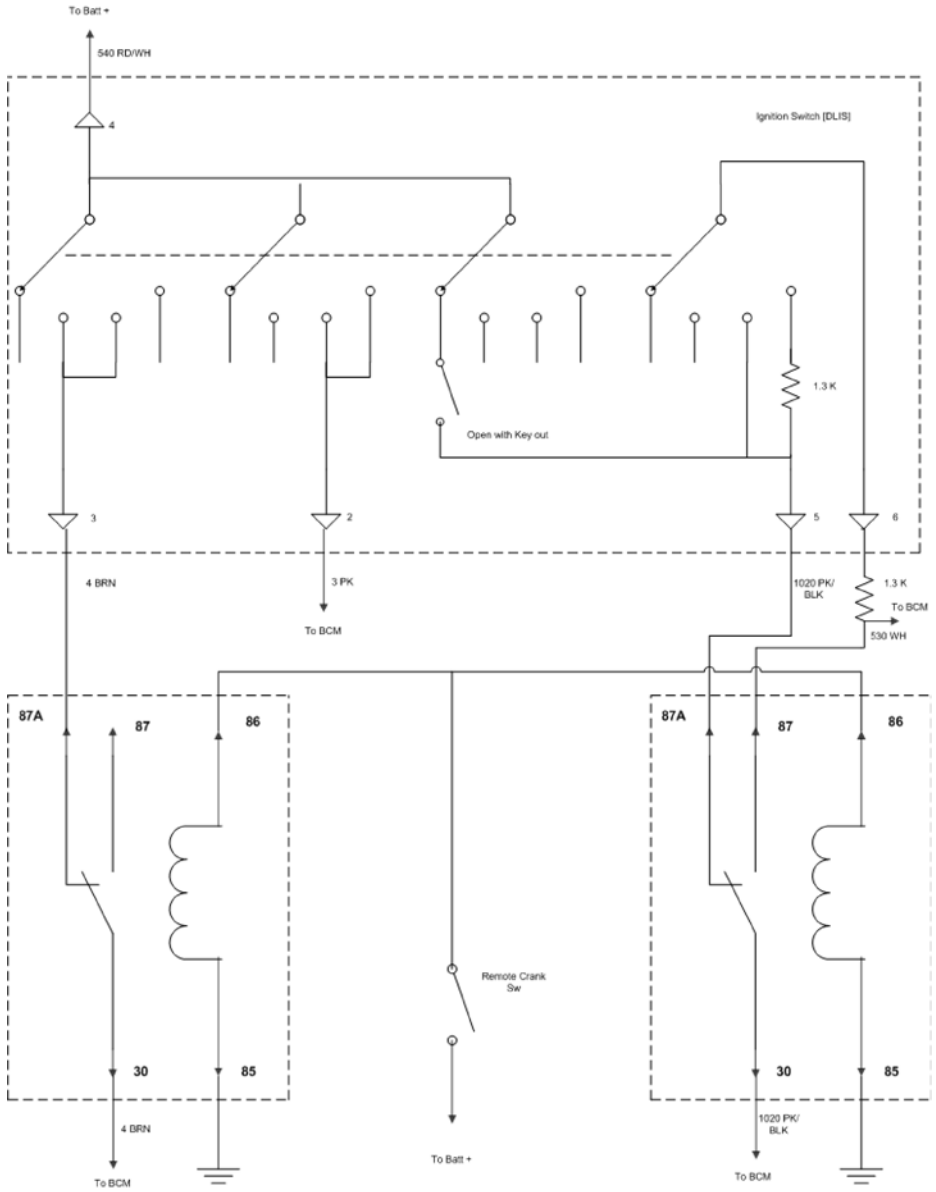


## Remote Start Stop

There is no OEM provision to remotely start and stop this vehicle. The best work around solution is to implement the wiring called out in the drawings GM Truck – CK GH Remote Crank and GM Trucks – CK GH – Engine Kill Sw. This method requires the key to be left in the ignition in the RUN position. If desired an interlock can be installed to immobilize the vehicle while in the remote modes. The schematic for this is in the Immobilizer quick reference.

Note: Pull fuse and install terminals into fuse block with wires to remote fuse holder. Install relay such that contacts can break 'load' side.



# Trailer Brake Description and Operation

## TRAILER BRAKE CONTROLS DESCRIPTION AND OPERATION

Some trucks less than 3900 Kg (8600 lb) GVW with a gasoline engine may be equipped with a Trailer Brake Control Module (TBCM) or a combination Fuel Pump/Trailer Brake Control Module (FTCM) system for electric trailer brakes. Some trucks greater than or equal to 3900 Kg (8600 lb) GVW may be equipped with a integrated Trailer Brake Control Module (TBCM) system for electric trailer brakes. The power output to the trailer brakes is based on the amount of brake pressure being applied in the vehicle's brake system. The available power output to the trailer brakes can be adjusted to a wide range of trailering situations.

Note: Connecting a trailer that is not compatible with the trailer brake system may result in reduced or complete loss of trailer braking. There may be an increase in stopping distance or trailer instability which could result in personal injury or damage to your vehicle, trailer, or other property. An aftermarket controller may be available for use with trailers with surge, air or electric-over-hydraulic trailer brake systems. To determine the type of brakes on your trailer and the availability of controllers, check with your trailer manufacturer or dealer. Do not power-up an aftermarket controller with the factory brake controller at the same time.

The vehicle is equipped with the following trailer braking components:

- Manual Trailer Brake Apply
- Trailer Gain Adjustment
- Trailer Brake Control Panel
- Trailer Brake Driver Information Center Display

The Trailer Brake Control Module (TBCM) or a combination Fuel Pump/Trailer Brake Control Module (FTCM) can support up to a maximum of 4 axles with electric trailer brakes (8 brake magnets).

### Manual Trailer Brake Apply

The Manual Trailer Brake Apply Lever is located on the Trailer Brake Control Panel, and is used to apply the trailer's electric brakes independent of your vehicle's brakes. This lever is used in the Trailer Gain Adjustment Procedure to properly adjust the power output to the trailer brakes. Sliding the lever to the left will apply only the trailer brakes. The power output to the trailer is indicated in the Trailer Brake Display Page in the Driver Information Center. If your vehicle's service brakes are applied while using the Manual Trailer Brake Apply Lever, the trailer output power will be the greater of the two.

The trailer and the vehicle's brake lamps will come on when either vehicle braking or manual trailer brakes are applied.



*(continued on next page)*

## Trailer Brake Description and Operation (cont'd)

**Manual Trailer Brake Apply**

The Manual Trailer Brake Apply Lever is located on the Trailer Brake Control Panel, and is used to apply the trailer's electric brakes independent of your vehicle's brakes. This lever is used in the Trailer Gain Adjustment Procedure to properly adjust the power output to the trailer brakes. Sliding the lever to the left will apply only the trailer brakes. The power output to the trailer is indicated in the Trailer Brake Display Page in the Driver Information Center. If your vehicle's service brakes are applied while using the Manual Trailer Brake Apply Lever, the trailer output power will be the greater of the two.

The trailer and the vehicle's brake lamps will come on when either vehicle braking or manual trailer brakes are applied.

**Trailer Gain Adjustment**

Trailer Gain should be set for a specific trailering condition, and must be adjusted any time vehicle loading, trailer loading or road surface conditions change.

Setting the Trailer Gain properly is needed for the best trailer stopping performance. A trailer that is over-gained may result in locked trailer brakes. A trailer that is under-gained may result in not enough trailer braking. Both of these conditions may result in poorer stopping and stability of the vehicle and trailer.

After the electrical connection is made to a trailer equipped with electric brakes, the TRAILER CONNECTED message will be momentarily displayed on the Driver Information Center. The Trailer Brake Display Page will appear on the Driver Information Center showing TRAILER GAIN and OUTPUT, after all vehicle related service messages are acknowledged by the driver. The dashed lines in the TRAILER OUTPUT display signifies a disconnected trailer or trailer brake fault condition, and will disappear only when the fault condition is not present.

- Adjust trailer gain in 0.5 step increments up to 10 gain setting by using the gain adjustment +/- buttons on the trailer brake control panel switch. Pressing and holding a gain button will cause the trailer gain to continuously increment or decrement. To turn the output to the trailer off, set the gain to zero.
- Drive the tow vehicle and trailer combination on a level road surface representative of the towing condition, and free of traffic at approximately 32-40 km/h (20-25 mph) and fully apply the manual trailer brake apply lever mechanism located on the trailer brake control panel switch. Adjusting trailer gain at slower speeds may result in an incorrect gain setting.
- Adjust the trailer gain to just below the threshold of trailer wheel lock-up. Important trailer wheel lock-up may not occur if towing a heavily loaded trailer. In this case, adjust the trailer gain to the highest allowable setting for the towing condition.



*(continued on next page)*

## Trailer Brake Description and Operation (cont'd)

### Trailer Brake Control Panel

Important: Re-adjust trailer gain any time tow vehicle and trailer loading or road surface conditions change or if you notice trailer wheel lock-up at any time while you are towing.

The trailer brake system has a control panel with the trailer gain and manual apply switches, and is located on the instrument panel to the left of the steering column. See Instrument Panel Overview for more information on location. The control panel and switches allows you to adjust the amount of output, referred to as trailer gain, available to the electric trailer brakes and allows you to manually apply the trailer brakes. The Trailer Brake Control Panel, and switches is used along with the Trailer Brake Display Page on the Driver Information Center to adjust and display power output to the trailer brakes.

### Driver Information Indicators and Messages

The following indicators are used to inform the driver of several different factors.

#### TRAILER CONNECTED

This message will be briefly displayed when a trailer with electric brakes is first connected to the vehicle. This message will automatically turn off in about ten seconds. The driver can also acknowledge this message before it automatically turns off.

#### CHECK TRAILER WIRING and TRAILER NOT CONNECTED

This message will be displayed if:

- The system detects a trailer with electric brakes is connected to the vehicle, and then the trailer harness becomes disconnected from the vehicle. If a trailer connection is made initially and the vehicle or trailer wiring connections is not correct the TRAILER NOT CONNECTED message will be displayed during the ignition key up as if there is no trailer connected.
- The trailer connection is recognized initially and then a disconnect occurs while the vehicle is stationary, this message will automatically turn off in about thirty seconds. This message will also turn off if the driver acknowledges this message off or if the trailer harness is reconnected.
- A disconnect of the trailer wiring harness occurs while the vehicle is moving, the CHECK TRAILER WIRING message will continue until the ignition is turned off. This message will also turn off if the driver acknowledges this message off or if the trailer harness is re-connected or repairs are completed.
- There is an electrical fault in the wiring to the electric trailer brakes. The CHECK TRAILER WIRING message will continue as long as there is an electrical fault in the trailer wiring. This message will also turn off if the driver acknowledges this message off.



*(continued on next page)*

## Trailer Brake Description and Operation (cont'd)

**Driver Information Indicators and Messages (cont'd)**

- A poor connection at the 7-way connector may cause the CHECK TRAILER WIRING message. Some aftermarket 7-way trailer side connector adapters or plugs may cause deformation or excessive wear to the vehicles trailer terminals. It is recommended that you use an OEM or Pollak Heavy Duty 7-Way Trailer Side Connector Adapter.

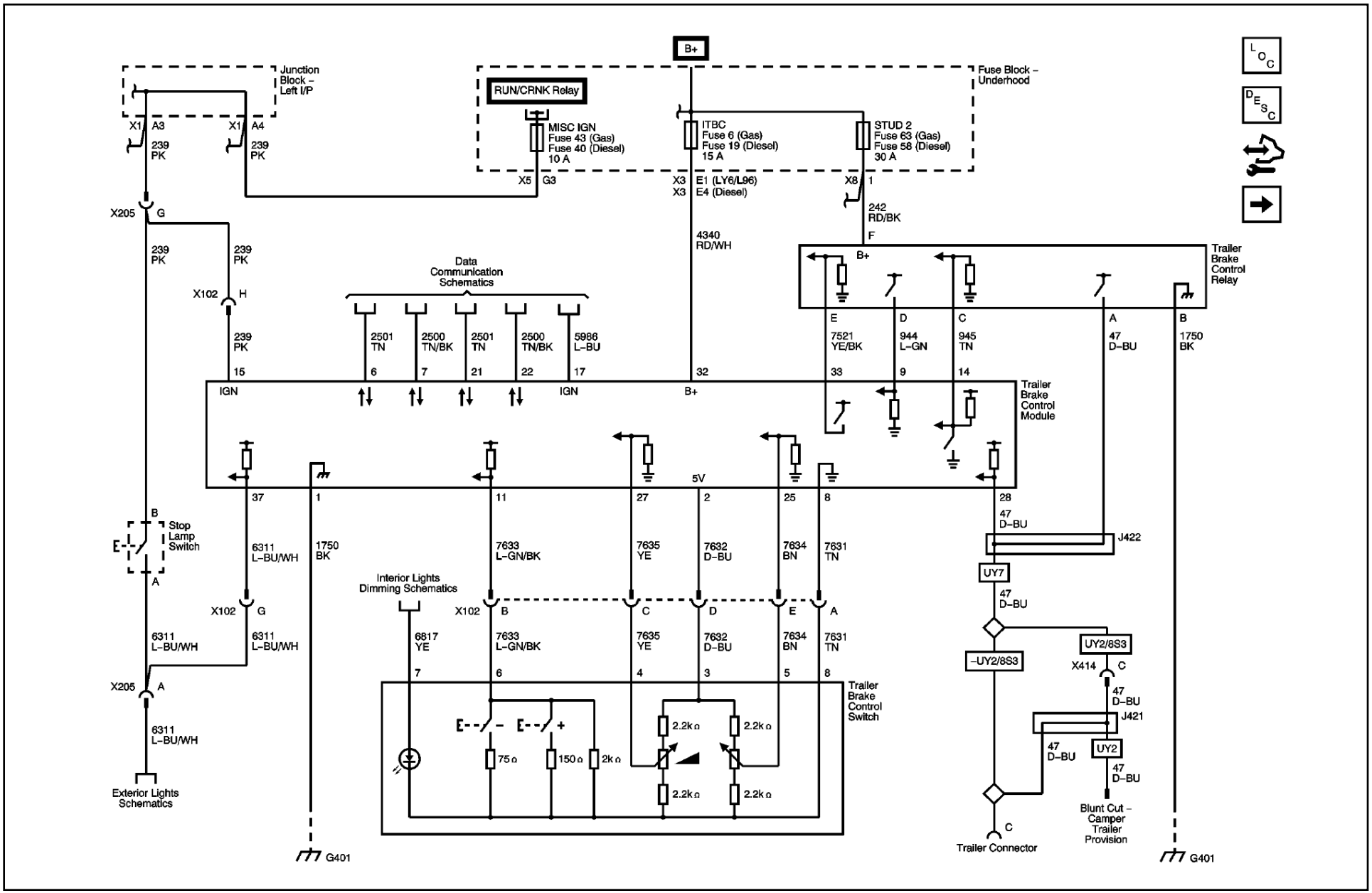
**SERVICE TRAILER BRAKE SYSTEM**

This message will be displayed when there is a problem with the trailer brake control system. If this message persists over multiple ignition cycles there is a concern with the trailer brake system. Take your vehicle to an authorized GM dealer to have the trailer brake system diagnosed and repaired.

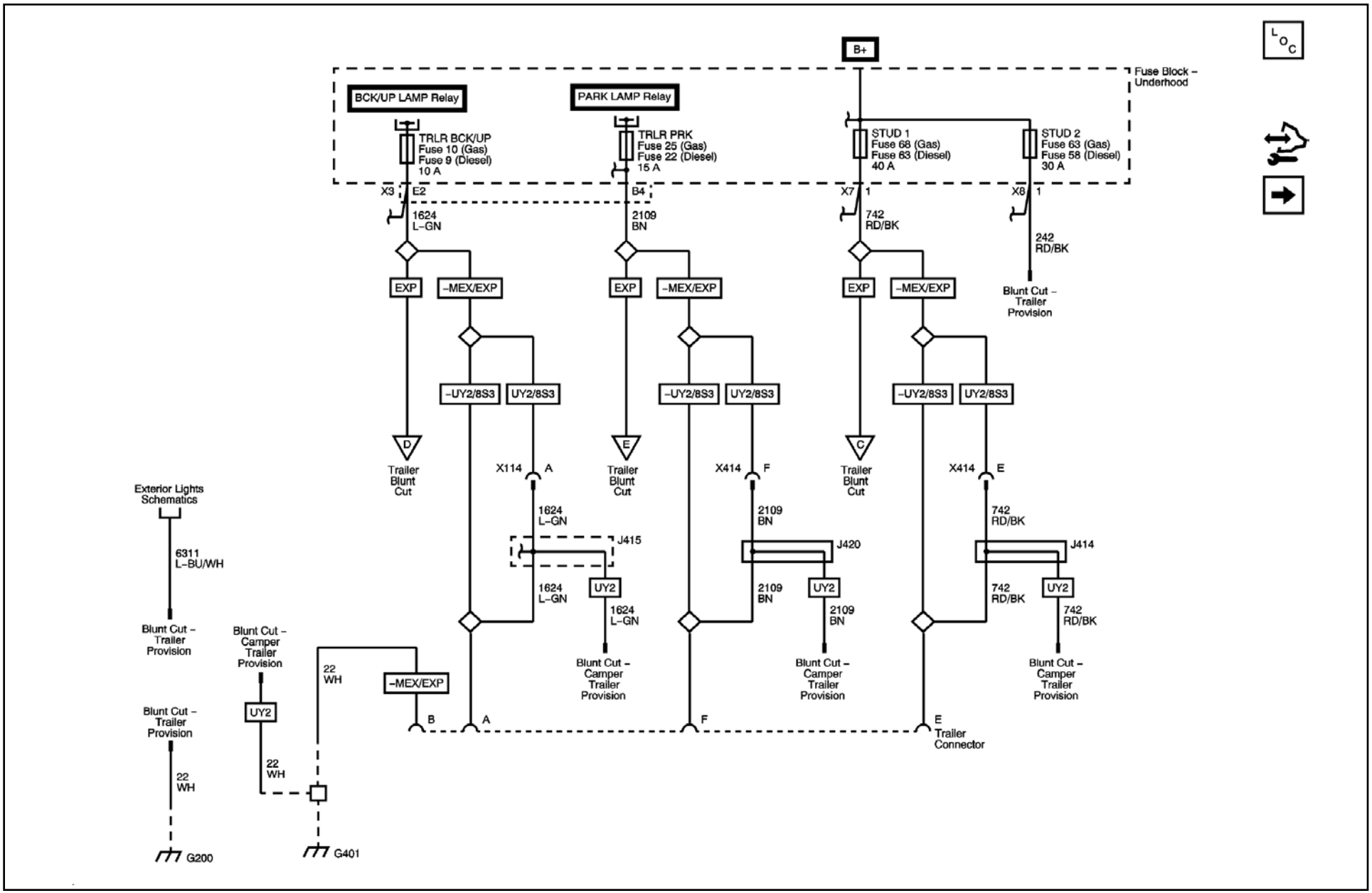
**TRAILER GAIN and OUTPUT Display**

This display menu can be accessed by scrolling through the Driver Information Center menu, or any time the trailer gain +/- button is depressed, or the manual trailer brake apply lever is actuated. The trailer gain display is 0 to 10 in 0.5 step increments, and indicates the current user setting of the trailer output gain. The trailer output is 0 to 10 bars in 1 bar increments, and indicates the output power provided to the trailer brakes, relative to the gain setting.

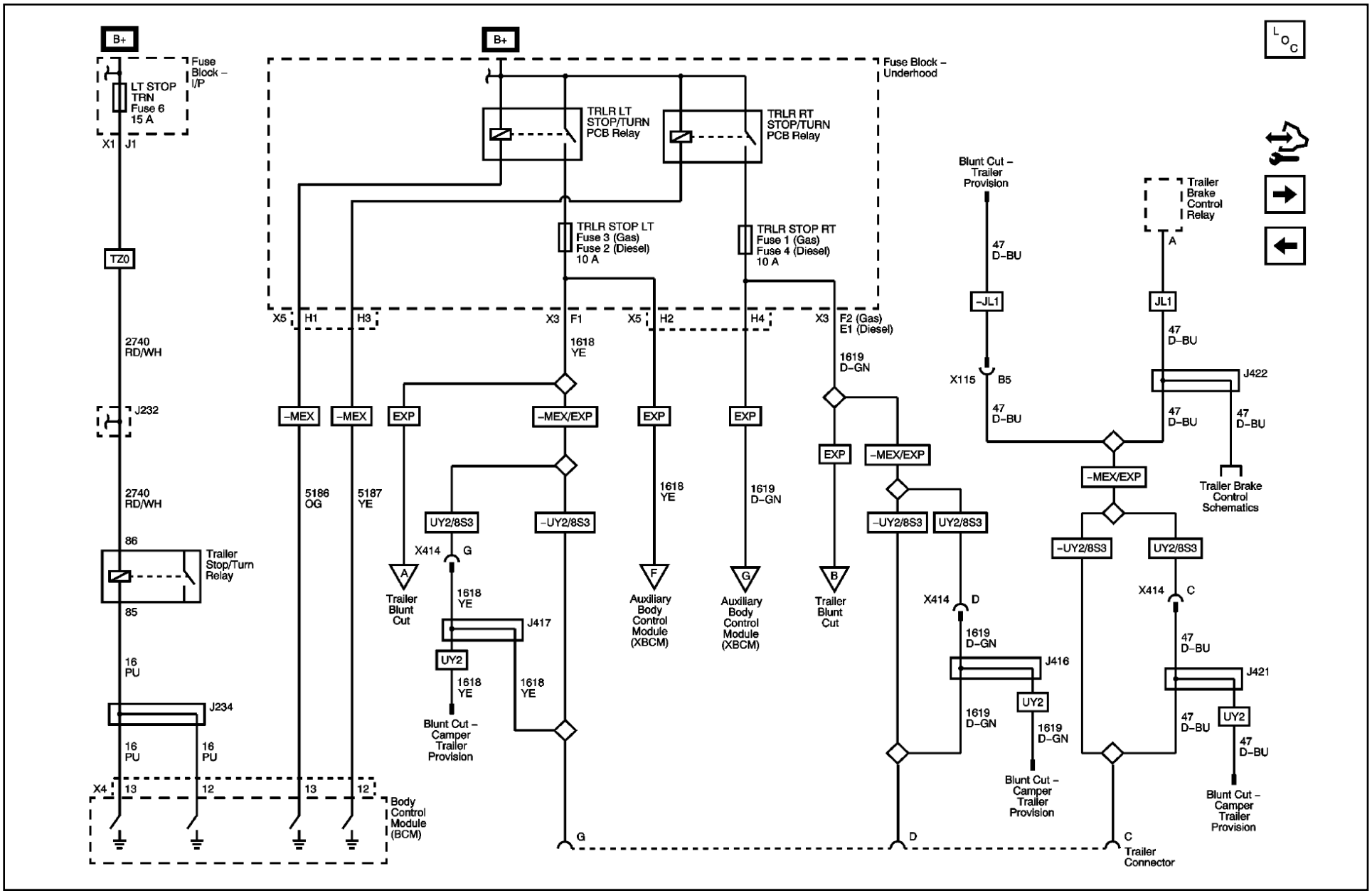
# Trailer Brake Control (JL1 except 10 Series)



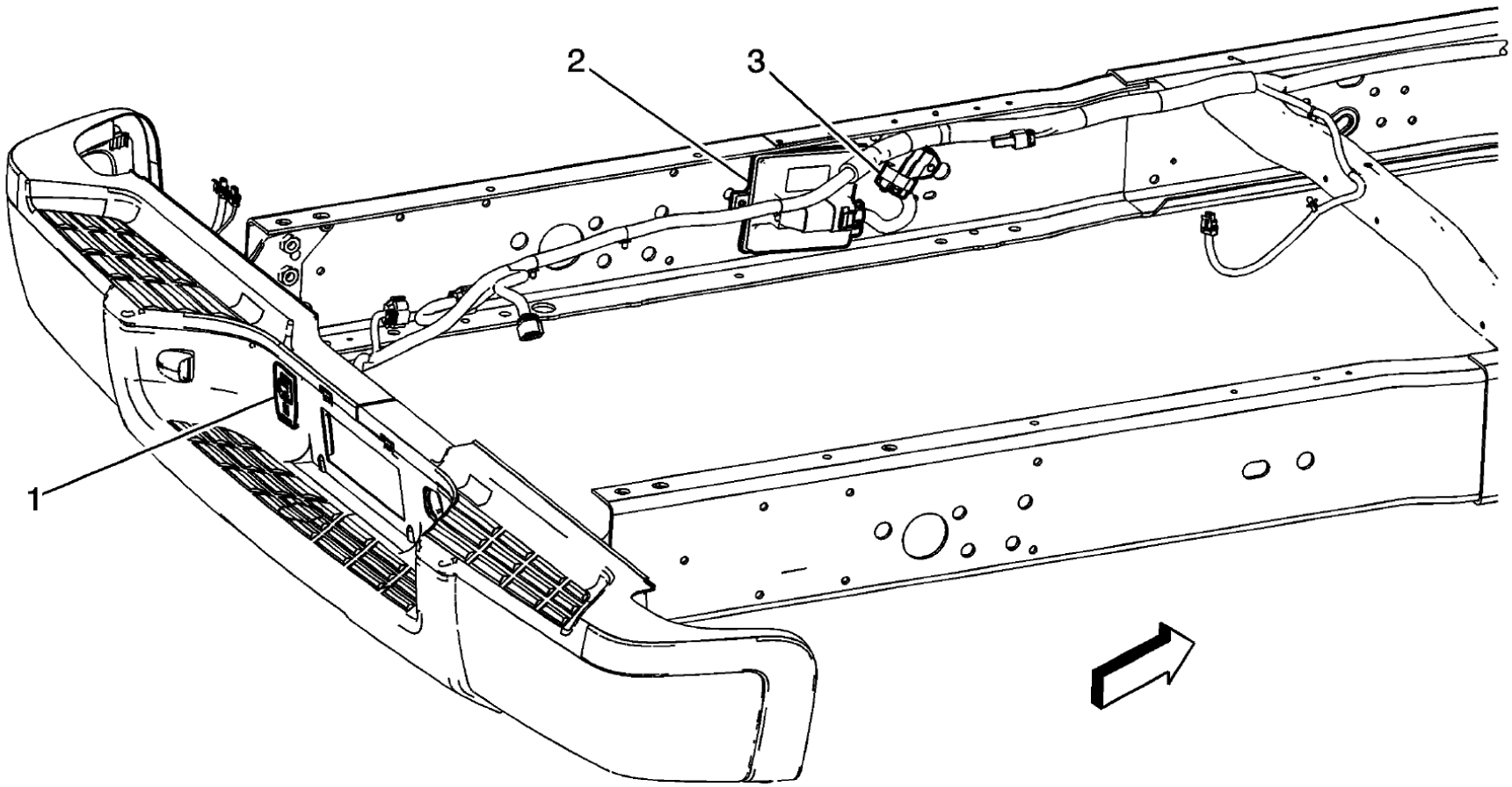
## Trailer Connector (1 of 2)



## Trailer Connector (2 of 2)



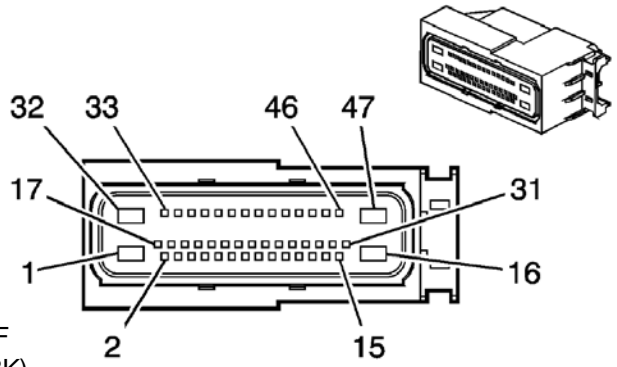
## *Rear Frame and Underbody Components (20/30 Series)*




(1) Trailer Connector (except MEX/EXP)
(2) Trailer Brake Control Module (JL1)
(3) Trailer Brake Control Relay (JL1)

# Trailer Brake Control Module (JL1 except 31 Series)

**Connector Part Information**




Harness: Chassis

OEM: 15491307

Service: 89047377

Description: 47-Way F ASG Series Sealed (BK)

**Terminal Part Information**

Pins: 1, 32

Terminal/Tray: 15476168/5

Core/Insulation Crimp: F/3

Release Tool/Test Probe: 15315247/J-35616-42 (RD)

Pins: 2, 6-9, 10-11, 14-15, 17, 21-22, 25, 28, 33, 37

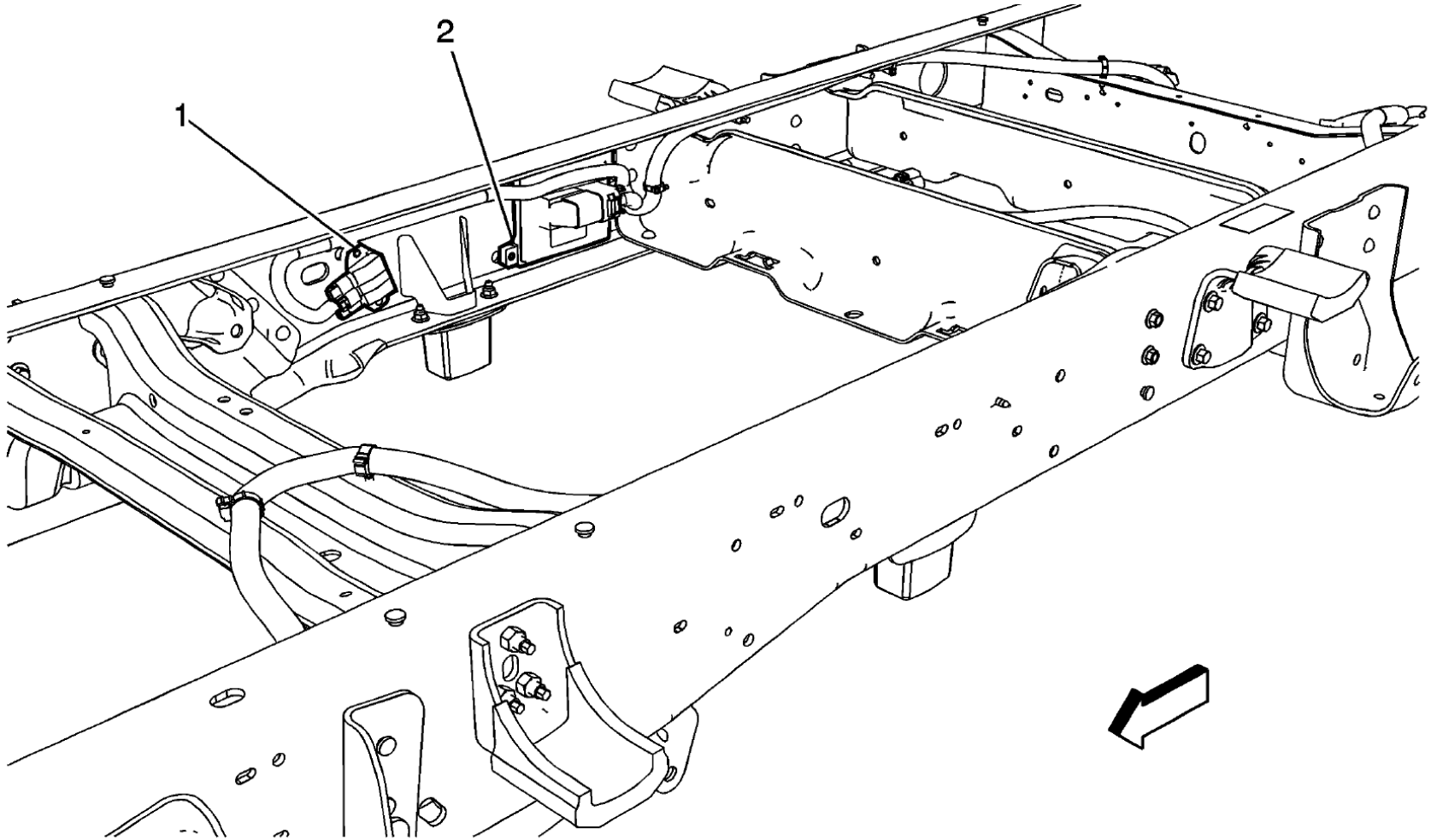
Terminal/Tray: SAITS-A03T-M064/14

Core/Insulation Crimp: 9/9

Release Tool/Test Probe: J-38125-215A/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 2 BK | 1750 | Ground |
| 2 | 0.5 D-BU | 7632 | 5-Volt Reference |
| 3-5 | -- | -- | Not Used |
| 6 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 7 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 8 | 0.5 TN | 7631 | Low Reference |
| 9 | 0.5 L-GN | 944 | Relay Feedback |
| 10 | -- | -- | Not Used |
| 11 | 0.5 L-GN/BK | 7633 | Integrated Trailer Brake Controller User Gain Signal |
| 12-13 | -- | -- | Not Used |
| 14 | 0.5 TN | 945 | Integrated Trailer Brake Relay Control Active Low |
| 15 | 0.5 PK | 239 | Ignition 1 Voltage |
| 16 | -- | -- | Not Used |
| 17 | 0.5 L-BU | 5986 | Serial Data Communication Enable |
| 18-20 | -- | -- | Not Used |
| 21 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 22 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 23-24 | -- | -- | Not Used |
| 25 | 0.5 BN | 7634 | Integrated Trailer Brake Controller Redundant Manual Apply Signal |
| 26 | -- | -- | Not Used |
| 27 | 0.5 YE | 7635 | Integrated Trailer Brake Controller Manual Apply Signal |
| 28 | 0.5 D-BU | 47 | Solid State Relay Feedback |
| 29-31 | -- | -- | Not Used |
| 32 | 2 RD/WH | 4340 | Battery Positive Voltage |
| 33 | 0.5 YE/BK | 7521 | Solid State Relay Enable |
| 34-36 | -- | -- | Not Used |
| 37 | 0.5 L-BU/WH | 6311 | TCC Brake Signal |
| 38-47 | -- | -- | Not Used |

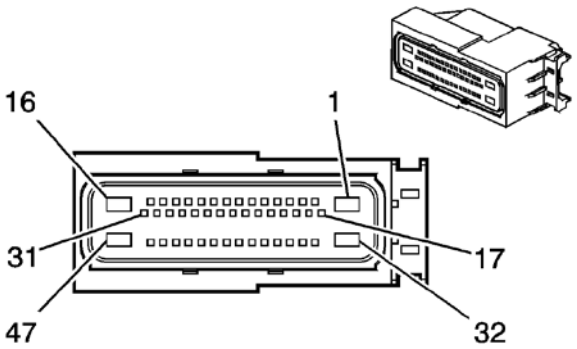
## Rear Frame and Underbody Components (31 Series)




(1) Trailer Brake Control Relay
(2) Trailer Brake Control Module

# Trailer Brake Control Module (JL1 with 31 Series)

**Connector Part Information**




Harness: Chassis

OEM: 15491306

Service: 19168025

Description: 47-Way F ASG Series Sealed (BK)

**Terminal Part Information**

Pins: 1, 32

Terminal/Tray: 15476168/5

Core/Insulation Crimp: F/3

Release Tool/Test Probe: 15315247/J-35616-42 (RD)

Pins: 2, 6-9, 10-11, 14-15, 17, 21-22, 25, 28, 33, 37

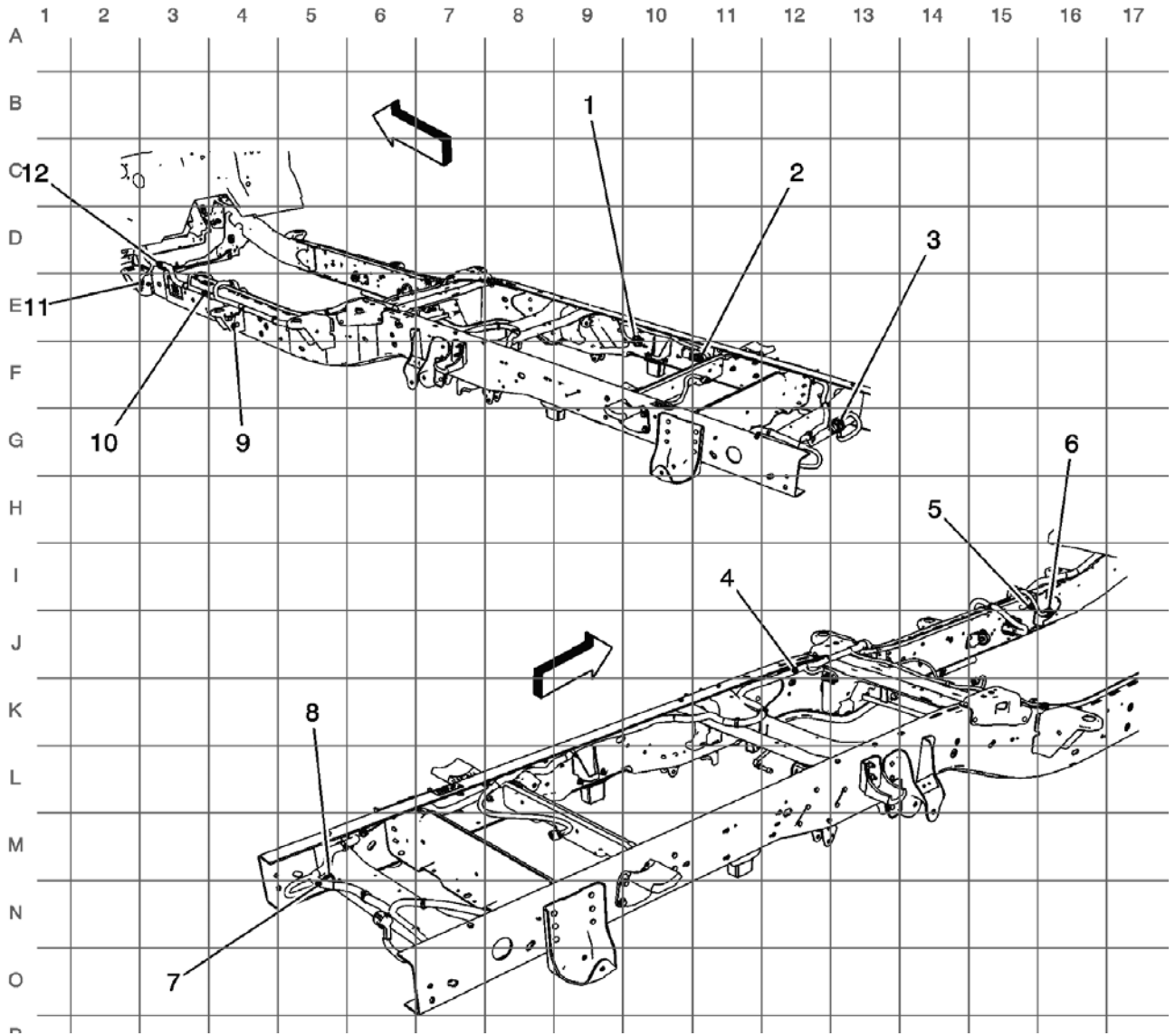
Terminal/Tray: SAITS-A03T-M064/14

Core/Insulation Crimp: 9/9

Release Tool/Test Probe: J-38125-215A/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 2 BK | 1750 | Ground |
| 2 | 0.5 D-BU | 7632 | 5-Volt Reference |
| 3-5 | -- | -- | Not Used |
| 6 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 7 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 8 | 0.5 TN | 7631 | Low Reference |
| 9 | 0.5 L-GN | 944 | Relay Feedback |
| 10 | -- | -- | Not Used |
| 11 | 0.5 L-GN/BK | 7633 | Integrated Trailer Brake Controller User Gain Signal |
| 12-13 | -- | -- | Not Used |
| 14 | 0.5 TN | 945 | Integrated Trailer Brake Relay Control Active Low |
| 15 | 0.5 PK | 239 | Ignition 1 Voltage |
| 16 | -- | -- | Not Used |
| 17 | 0.5 L-BU | 5986 | Serial Data Communication Enable |
| 18-20 | -- | -- | Not Used |
| 21 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 22 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 23-24 | -- | -- | Not Used |
| 25 | 0.5 BN | 7634 | Integrated Trailer Brake Controller Redundant Manual Apply Signal |
| 26 | -- | -- | Not Used |
| 27 | 0.5 YE | 7635 | Integrated Trailer Brake Controller Manual Apply Signal |
| 28 | 0.5 D-BU | 47 | Solid State Relay Feedback |
| 29-31 | -- | -- | Not Used |
| 32 | 2 RD/WH | 4340 | Battery Positive Voltage |
| 33 | 0.5 YE/BK | 7521 | Solid State Relay Enable |
| 34-36 | -- | -- | Not Used |
| 37 | 0.5 L-BU/WH | 6311 | TCC Brake Signal |
| 38-47 | -- | -- | Not Used |

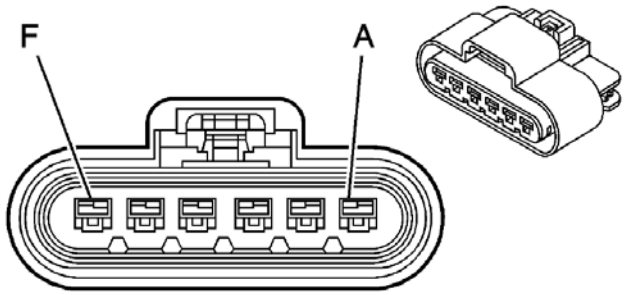
## Chassis Harness (31 Series)




(1) Trailer Brake Control Relay (JL1)
(2) J422 (JL1)
(3) Trailer Connector
(4) J331 (Diesel without NQZ/LY6)
(5) X300 (LY6)
(6) X300 (Diesel)
(7) J411 (JL1)
(8) Junction Block - Rear Lamps
(9) G401
(10) J338 (JL1)
(11) G300
(12) J300 (LY6 without NQZ)

# Trailer Brake Control Relay (JL1)

**Connector Part Information**




Harness: Chassis

OEM: 15326635

Service: 88953154

Description: 6-Way F GT 280 Series (BK)

**Terminal Part Information**

Pins: A-B, F

Terminal/Tray: 15304720/19

Core/Insulation Crimp: 4/5

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: C-D, E

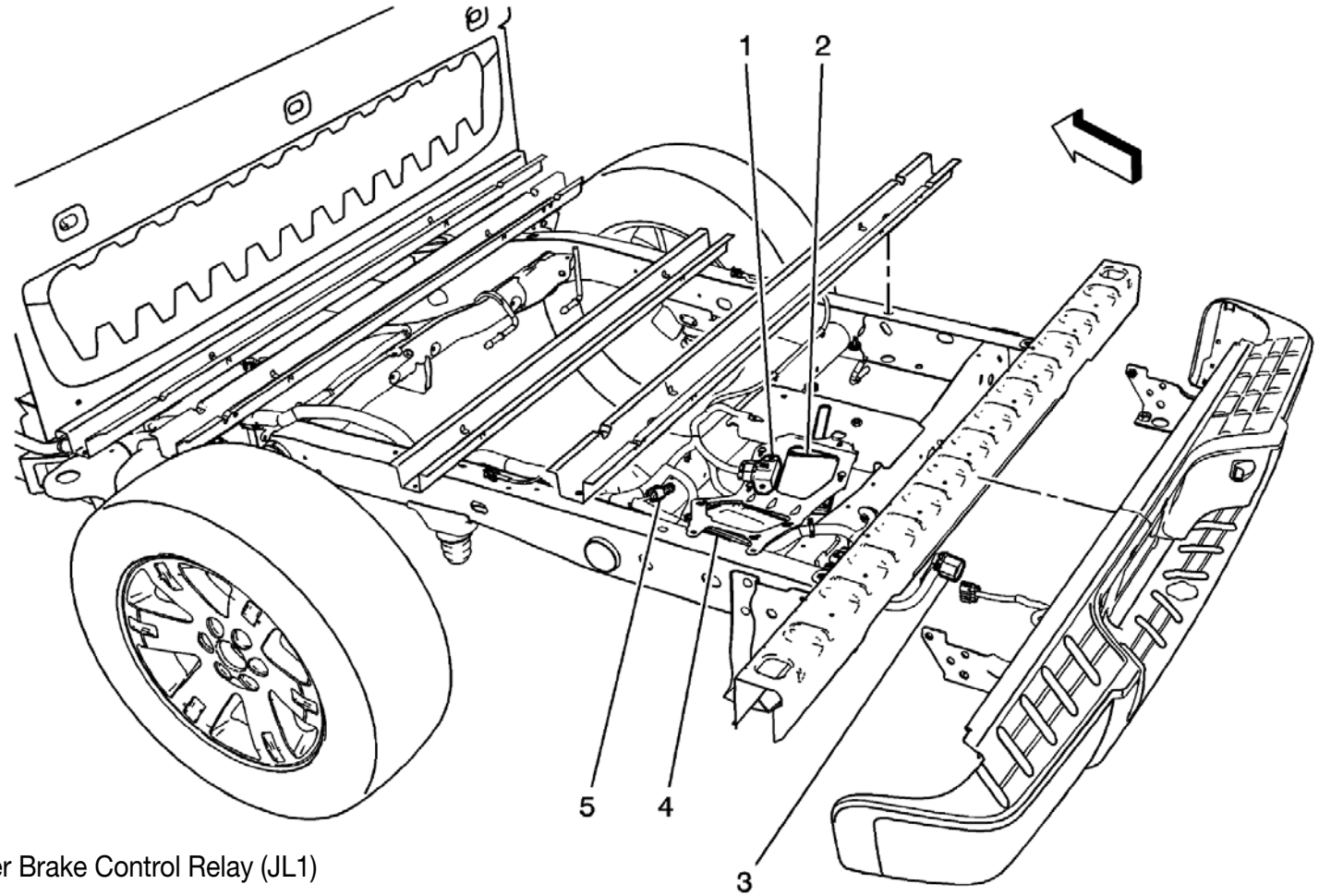
Terminal/Tray: 15304719/19

Core/Insulation Crimp: E/5

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 3 D-BU | 47 | Trailer Brake Output Supply Voltage |
| B | 3 BK | 1750 | Ground |
| C | 0.5 TN | 945 | Integrated Trailer Brake Relay Control Active Low |
| D | 0.5 L-GN | 944 | Relay Feedback |
| E | 0.5 YE/BK | 7521 | Solid State Relay Enable |
| F | 3 RD/BK | 242 | Battery Positive Voltage |

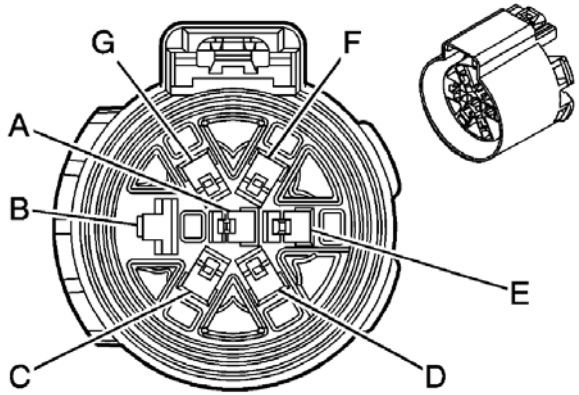
## Rear Frame and Underbody Components (10 Series)




(1) Trailer Brake Control Relay (JL1)
(2) Fuel Pump/Trailer Brake Control Module (JL1)
(3) Trailer Connector (except MEX or EXP)
(4) Fuel Pump Flow Control Module (except LU3 or JL1)
(5) Data Link Resistor

# Trailer Connector (except MEX or EXP)

**Connector Part Information**




Harness: Camper

OEM: 13626146

Service:15306164

Description: 7-Way F Metri-Pack 280/630 Series Sealed (D-GY)

**Terminal Part Information**

Pins: A, D, F, G

Terminal/Tray: 12110847/4

Core/Insulation Crimp: C/5

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B

Terminal/Tray: 15305232/23

Core/Insulation Crimp: B/3

Release Tool/Test Probe: 12094430/J-35616-42 (RD)

Pins: C, E

Terminal/Tray: 12110845/4

Core/Insulation Crimp: F/5

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 1 L-GN | 1624 | Trailer Backup Lamps Supply Voltage |
| B | 5 WH | 22 | Ground |
| C | 3 D-BU | 47 | Solid State Relay Feedback |
| D | 0.8 D-GN | 1619 | Trailer Right Rear Turn/Stop Lamp Supply Voltage |
| E | 3 RD/BK | 742 | Battery Positive Voltage |
| F | 1 BN | 2109 | Trailer Park Lamps Supply Voltage |
| G | 0.8 YE | 1618 | Trailer Left Rear Turn/Stop Lamp Supply Voltage |

# Trailer Brake - Installation of Aftermarket Trailer Brake Controller

**#06-08-45-008D: Information on Auxiliary Power Wire at Trailer and Installation of Aftermarket Trailer Brake Controller - Towing, Tow - (Jul 12, 2010)**

| Subject: | Information on Auxiliary Power Wire at Trailer and Installation of Aftermarket Trailer Brake Controller -- Towing, Tow |
|---|---|
| Models: | 2007-2011 Cadillac Escalade, Escalade ESV, Escalade EXT |
| | 2007-2011 Chevrolet Avalanche, Silverado, Suburban, Tahoe |
| | 2007-2011 GMC Sierra, Yukon, Yukon Denali, Yukon XL, Yukon Denali XL |
| | 2008-2011 HUMMER H2 |

This bulletin is being revised to add the 2011 model year and information about the orientation of the ringlet. Please discard Corporate Bulletin Number 06-08-45-008C (Section 08 - Body and Accessories).

Important: Installation of an electric brake controller and the wiring connections outlined in this bulletin are the responsibility of the dealership or customer. These repairs should never be charged to warranty. If you have any questions, please consult with your District Service Manager.

Some customers may have questions on how to connect an electric trailer brake controller or where the brake controller pigtail harness is located.

Starting with the new 2007 full-size utilities and pickups and 2008 HUMMER H2, there is no longer an electric trailer brake controller pigtail harness.

An aftermarket brake controller will need to be installed/connected to the blunt wires under the left side of the IP for vehicles built ***without*** JL1 - Integrated Brake Controller (full-size utilities and pickups).. The following steps should be used to complete the installation.



*(continued on next page)*

## Trailer Brake - Installation of Aftermarket Trailer Brake Controller (cont'd)

Important: Installation of an electric brake controller and the wiring connections outlined in this bulletin are the responsibility of the dealership or customer. These repairs should never be charged to warranty. If you have any questions, please consult with your District Service Manager.

Some customers may have questions on how to connect an electric trailer brake controller or where the brake controller pigtail harness is located.

Starting with the new 2007 full-size utilities and pickups and 2008 HUMMER H2, there is no longer an electric trailer brake controller pigtail harness.

An aftermarket brake controller will need to be installed/connected to the blunt wires under the left side of the IP for vehicles built ***without*** JL1 - Integrated Brake Controller (full-size utilities and pickups). The following steps should be used to complete the installation.

1. Locate the trailer brake control circuits that are looped and taped to the main harness under the instrument panel.

2. Pull the trailering wire harness down.



*(continued on next page)*

## Trailer Brake - Installation of Aftermarket Trailer Brake Controller (cont'd)

3. Match the vehicle harness label circuit functions to the trailer brake controller jumper harness functions.

**Important:** The color or wires to be joined together may not match.

- Dark Blue Wire: switched power from controller to trailer brakes
- Red with Black Stripe: fused vehicle power to electrical brake controller
- Light Blue with White Stripe: Brake switch input to power electric brake controller
- White: ground
- Orange: CHMSL (Center High Mounted Stop Lamp) -- not required with most systems

4. After completing the under dash connections to the electric brake controller, open the hood and locate the red wire that is taped to the harness between the underhood electrical center and the driver side front fender.
5. Break the tape on the red/black wire and pull it toward the front of vehicle.
6. Remove the lid from the electrical center.

**Important:** Ensure that the ringlets are not interfering with the UBEC cover.

7. Place the terminal on the larger of the two studs at the front of the electrical center and secure with an M8 nut. This is circuit #242 to stud #2, to power the aftermarket trailer brake controller.

**Important:** The fuse is already present in the vehicle to power the electrical trailer brake controller system.



*(continued on next page)*

## Trailer Brake - Installation of Aftermarket Trailer Brake Controller (cont'd)

### Auxiliary Power (Applies to All LD & 07-09 HD's Only)

Circuit #742 for Auxiliary Power at the 7-way trailer connector is no longer connected by the GM Assembly Plant. If the customer desires auxiliary power at the trailer connector location (i.e. refrigeration, battery charger or interior light in the trailer), complete the following steps to connect circuit #742:

1. Locate the red/black wire, looped and taped to the chassis harness, below the brake master cylinder.
2. Break the tape and route the wire to the front of the underhood electrical center.

**Important:** Ensure that the ringlets are not interfering with the UBEC cover.

3. Place the terminal on the smaller of the two studs on the electrical center and secure with an M6 fastener. This is circuit #742 to stud #1 for auxiliary power to the 7-way trailer connector.
4. ONLY for vehicles without RPO TP2 - Auxiliary Battery, install a 40 amp fuse to power the circuit.

**Important:** For vehicles equipped ***with*** RPO TP2 -- Devices powered by this fuse will drain the vehicle battery if left connected with the vehicle not running.

### Warranty Information

This installation procedure is to be performed at the customer's request and at their expense. It is not a warranty repair and a claim should not be submitted for reimbursement.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.

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*(continued on next page)*

## Trailer Brake - Installation of Aftermarket Trailer Brake Controller (cont'd)

**#07-08-45-001E: Procedure for Installation of Aftermarket Trailer Brake Controller in Lieu of Factory Installed Integrated Trailer Brake Controller - (Jul 12, 2010)**

| Subject: | Procedure for Installation of an Aftermarket Trailer Brake Controller in Lieu of Factory Installed Integrated Trailer Brake Controller |
|---|---|
| Models: | 2007-2011 Chevrolet Silverado |
| | 2009-2011 Chevrolet Suburban, Tahoe |
| | 2007-2011 GMC Sierra |
| | 2009-2011 GMC Yukon Models |
| | with Integrated Trailer Brake Controller |

This bulletin is being revised to add the 2011 model year. Please discard Corporate Bulletin Number 07-08-45-001D (Section 08 - Body & Accessories).

Some customers may request to have an aftermarket trailer brake controller added, in lieu of the factory integrated trailer brake controller (ITBC). This request may be made if the trailer being towed is equipped with electric over hydraulic brakes. This style of trailer brake system is not supported by the ITBC. An aftermarket trailer brake controller may be installed to operate with the electric over hydraulic brakes, however the factory installed ITBC system will be disabled.



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## Trailer Brake - Installation of Aftermarket Trailer Brake Controller (cont'd)

### Installation Instructions

To install an aftermarket trailer brake controller, use the four blunt cut wires located near the data link connector. Make the following changes to the vehicle harness:

| Four Blunt Cut Wires | | |
|---|---|---|
| Dark Blue | Circuit 47 | Brake Signal to Trailer Connector |
| Red/Black | Circuit 242 | Battery Power |
| Light Blue/White | Circuit 6311 | Brake Switch Input |
| White | Circuit 22 | Ground |

1. The Red/Black wire, circuit 242, must be connected to stud #2 of the 30 Amp fuse of the underhood fuse block. This wire is located between the left fender and the underhood fuse block.
2. Locate connector X126 or X115 (varies with vehicle build; refer to SI) near the underhood fuse block. Refer to SI Document ID# 1849049 - I/P Harness-Engine Compartment. Circuit 47 from the blunt cut wires near the data link connector will end at connector X126 terminal "G" or X115 terminal "B5." Obtain enough Dark Blue 12 gauge wire to run from X126/X115 to the 7-way trailer connector at the bumper. On one end of the Dark Blue wire attach terminal part number 15304732, located in Delphi Tray 8 and insert into X126 "G" or terminal part number 15304720 located in Delphi Tray 19 and insert into X115 "B5." Run the Dark Blue wire in its own conduit along the frame to the 7-way trailer connector at the bumper. Remove circuit 47 from the 7-way trailer connector terminal "C" and tape the bare terminal and attach to the harness. Attach terminal part number 12110853, located in Delphi Tray 4, to the other end of the Dark Blue wire and insert it into the 7-way trailer connector terminal "C."

Important: This procedure will not result in any trailer brake related display messages to be set. However, ITBC diagnostics will continue to function. If an ITBC fault is detected, a "Service Trailer Brake System" message will be displayed on the driver information center (DIC) and an appropriate DTC will be stored in the ITBC module. The operator will still be able to adjust gain and access the "Trailer Gain / Output" display page in the DIC. However, the factory installed ITBC system will not sense a trailer connection and will not provide output to the trailer.

### Warranty Information

This installation procedure is to be performed at the customer's request and at their expense. It is not a warranty repair and a claim should not be submitted for reimbursement.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.

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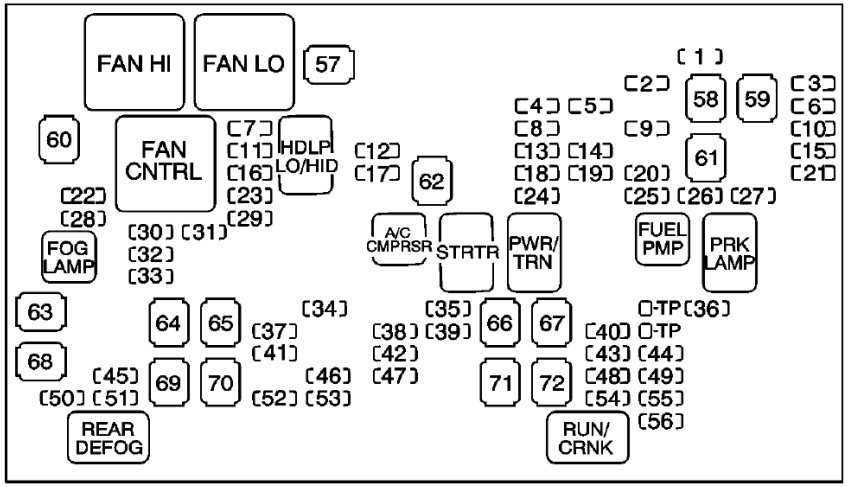
# Fuse Block - Underhood Label

## GAS
## ESSENCE




### MINI FUSES
### MINI–FUSIBLES

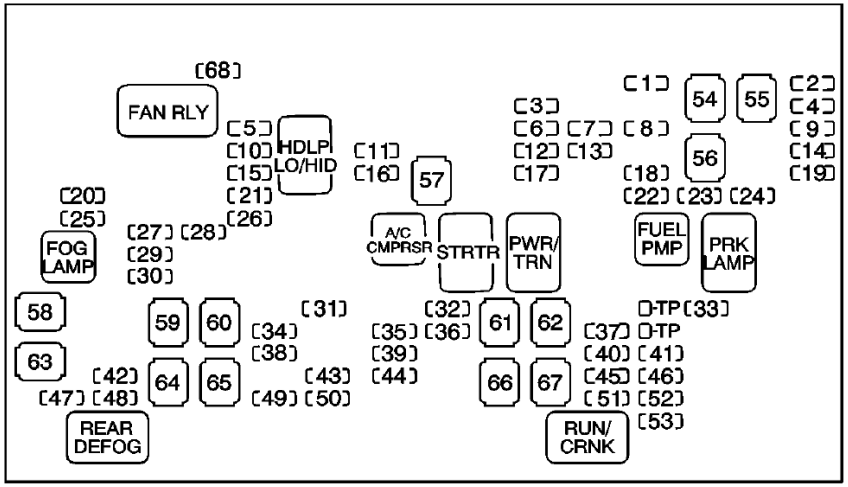
1 – TRLR STOP RT (10A)
2 – ESC/ALC EXH (30A)
3 – TRLR STOP LT (10A)
4 – ENG (15A)
5 – ECM/THROT CONT (15A)
6 – ITBC (15A)
7 – FRT WASH (15A)
8 – 02–B SNSR (10A)
9 – ABS 2 (25A)
10 – TRLR BCK/UP (10A)
11 – LO HDLP–LT (20A)
12 – ECM–BATT (10A)
13 – INJ–B (20A)
14 – TCM–BATT (15A)
15 – VEH BCK/UP (10A)
16 – LO HDLP–RT (20A)
17 – A/C CMPSR (10A)
18 – 02–A SNSR (10A)
19 – TRANS IGN 1 (15A)
20 – FUEL PUMP (25A)
21 – FSCM (25A)
22 – HDLP WASH (20A)
23 – REAR WASH (15A)
24 – INJ–A (20A)
25 – TRLR PRK (15A)
26 – LT PRK (15A)
27 – RT PRK (15A)
28 – FOG LAMP (15A)
29 – HORN (15A)
30 – HI HDLP–RT (10A)
31 – DRL (15A)
32 – HI HDLP–LT (10A)
33 – DRL 2 (15A)
34 – S/ROOF (30A)
35 – DLIS (2A)
36 – FRT WPR (25A)
37 – SEO B2 (30A)
38 – EAP (15A)
39 – HVAC BATT (10A)
40 – AIRBAG IGN (10A)
41 – AMP (30A)
42 – RDO (15A)
43 – MISC IGN (10A)
44 – L/GATE RELSE (15A)
45 – AIRBAG BATT (15A)
46 – IPC (10A)
47 – EXP/PTO (15A)
48 – AUX HVAC–IGN (10A)
49 – CHMSL (15A)
50 – REAR DEFOG (30A)
51 – HTD MIR (15A)
52 – SEO B1 (15A)
53 – LTR (20A)
54 – SEO/ALC (10A)
55 – HVAC–IGN (10A)
56 – ECM–IGN (15A)

### J–CASE FUSES
### FUSIBLES JCASE

57 – FAN–1 (40A)
58 – ALC/COMP (40A)
59 – HEAVY DUTY ABS (60A)
60 – FAN–2 (40A)
61 – ABS–1 (40A)
62 – STRTR (40A)
63 – STUD–2 (30A)
64 – LBEC1 (60A)
65 – ELEC RUN BOARD (30A)
66 – WSW/HTR (60A)
67 – TREC (30A)
68 – STUD–1 (40A)
69 – MBEC1 (60A)
70 – HVAC BLWR (40A)
71 – LGM (30A)
72 – LBEC2 (60A)

TP

## DIESEL




### MINI FUSES
### MINI–FUSIBLES

1 – ESC/ALC EXH (30A)
2 – TRLR STOP LT (10A)
3 – ENG (15A)
4 – TRLR STOP RT (10A)
5 – FRT WASH (15A)
6 – FUEL HTR (15A)
7 – TCM–BATT (15A)
8 – ABS 2 (25A)
9 – TRLR BCK/UP (10A)
10 – LO HDLP–LT (20A)
11 – ECM–BATT (10A)
12 – DSL ECM (30A)
13 – TRNS IGN 1 (15A)
14 – VEH BCK/UP (10A)
15 – LO HDLP–RT (20A)
16 – A/C CMPRSR (10A)
17 – EMC/THROT CONT (15A)
18 – FUEL PUMP (25A)
19 – ITBC (15A)
20 – HDLP WASH (20A)
21 – REAR WASH (15A)
22 – TRLR PRK (15A)
23 – LT PRK (15A)
24 – RT PRK (15A)
25 – FOG LAMP (15A)
26 – HORN (15A)
27 – HI HDLP–RT (10A)
28 – DRL (15A)
29 – HI HDLP–LT (10A)
30 – DRL 2 (15A)
31 – S/ROOF (30A)
32 – DLIS (2A)
33 – WPR (25A)
34 – SEO B2 (30A)
35 – EAP (15A)
36 – HVAC BATT (10A)
37 – AIRBAG IGN (10A)
38 – AMP (30A)
39 – RDO (15A)
40 – MISC IGN (10A)
41 – L/GATE RELSE (15A)
42 – AIRBAG BATT (15A)
43 – IPC (10A)
44 – EXP/PTO (15A)
45 – AUX HVAC–IGN (10A)
46 – CHMSL (15A)
47 – REAR DEFOG (30A)
48 – HTD MIR (15A)
49 – SEO B1 (15A)
50 – LTR (20A)
51 – SEO/ALC (10A)
52 – HVAC–IGN (10A)
53 – ECM–IGN (15A)
68 – FAN (10A)

### J–CASE FUSES
### FUSIBLES JCASE

54 – ALC/COMP (40A)
55 – HEAVY DUTY ABS (60A)
56 – ABS–1 (40A)
57 – STRTR (40A)
58 – STUD–2 (30A)
59 – LBEC1 (60A)
60 – ELEC RUN BOARD (30A)
61 – WSW/HTR (60A)
62 – TREC (30A)
63 – STUD–1 (40A)
64 – MBEC1 (60A)
65 – HVAC BLWR (40A)
66 – LGM (30A)
67 – LBEC2 (60A)

TP

*(continued on next page)*

## Fuse Block - Underhood Label Usage - Diesel

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | ESC/ALC EXH Fuse | 30A | Not Used |
| 2 | TRLR STOP LT Fuse | 10A | Trailer Wiring, Auxiliary Body Control Module (XBCM) (EXP) |
| 3 | ENG Fuse | 15A | Mass Air Flow (MAF)/Intake Air Temperature (IAT) Sensor |
| 4 | TRLR STOP RT Fuse | 10A | Trailer Wiring, Auxiliary Body Control Module (XBCM) (EXP) |
| 5 | FRT WASH Fuse | 15A | Windshield Washer Fluid Pump |
| 6 | FUEL HTR Fuse | 15A | Glow Plug Control Module (GPCM), Fuel Heater |
| 7 | TCM-BATT Fuse | 15A | Transmission Control Module (TCM) |
| 8 | ABS 2 Fuse | 25A | Electronic Brake Control Module (EBCM) |
| 9 | TRLR BCK/UP Fuse | 10A | Trailer Wiring, Backup Alarm (8S3) |
| 10 | LO HDLP-LT Fuse | 20A | Headlamp - Left Low Beam |
| 11 | ECM-BATT Fuse | 10A | Engine Control Module (ECM) |
| 12 | DSL ECM Fuse | 30A | Engine Control Module (ECM) |
| 13 | TRANS IGN 1 Fuse | 15A | Transmission Control Module (TCM), Front Drive Axle Actuator (NQF or NQG) |
| 14 | VEH BCK/UP Fuse | 10A | Backup Lamp - Left, Backup Lamp - Right |
| 15 | LO HDLP-RT Fuse | 20A | Headlamp - Right Low Beam |
| 16 | A/C CMPRSR Fuse | 10A | A/C Compressor Clutch |
| 17 | ECM/THROT CONT Fuse | 15A | Engine Control Module (ECM) |
| 18 | FUEL PUMP Fuse | 25A | Fuel Pump and Sender Assembly - Front, Fuel Pump |
| 19 | ITBC Fuse | 15A | Integrated Trailer Brake Control Module (JL1) |
| 20 | HDLP WASH Fuse | 20A | Not Used |
| 21 | REAR WASH Fuse | 15A | Not Used |
| 22 | TRLR PRK Fuse | 15A | Trailer Wiring |
| 23 | LT PRK Fuse | 15A | License Lamp - Left, Marker Lamp - LF (Z88), Park/Turn Signal Lamp - LF Upper, Park/Turn Signal Lamp - LF Lower, Marker Lamp - LR (Z88), Tail/Stop and Turn Signal Lamp - Lower Left, Tail/Stop and Turn Signal Lamp - Upper Left, Clearance Lamp - LF (RO5), Clearance Lamp - LR (R05), Clearance Lamp (U01), Roof Marker Lamp - Left (U01), Roof Marker Lamp - Right (U01) |
| 24 | RT PRK Fuse | 15A | Marker Lamp - RF (Z88), Park/Turn Signal Lamp - RF Upper, Park/Turn Signal Lamp - RF Lower, Tail/Stop and Turn Signal Lamp - Lower Right , Tail/Stop and Turn Signal Lamp - Lower Right , Marker Lamp - RR (Z88), License Lamp - Right, Clearance Lamp - RF (R05), Clearance Lamp - RR (R05), Marker Lamp - Tailgate |

*(continued on next page)*

## Fuse Block - Underhood Label Usage - Diesel (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 25 | FOG LAMP Fuse | 15A | Fog Lamp - Left Front (T96), Fog Lamp - Right Front (T96) |
| 26 | HORN Fuse | 15A | Horn - Left, Horn - Right (7Z1 or YE9) |
| 27 | HI HDLP-RT Fuse | 10A | Headlamp - Right High Beam |
| 28 | DRL Fuse | 15A | DRL 2 Fuse |
| 29 | HI HDLP-LT Fuse | 10A | Headlamp - Left High Beam |
| 30 | DRL 2 Fuse | 15A | LO HDLP - LT Fuse, LO HDLP - RT Fuse |
| 31 | S/ROOF Fuse | 30A | Sunroof Module (CF5), Roof Beacon Relay (TRW) |
| 32 | DLIS Fuse | 2A | Ignition Switch, Theft Deterrent Module (TDM) |
| 33 | WPR Fuse | 25A | WIPER CONTROL PCB Relay |
| 34 | SEO B2 Fuse | 30A | Emergency Vehicle Roof Lamp Relay (5Y0) |
| 35 | EAP Fuse | 15A | PARK ENABLE PCB Relay, ELECTRONIC ADJUSTABLE PEDALS PCB Relay |
| 36 | HVAC BATT Fuse | 10A | HVAC Control Module |
| 37 | AIRBAG IGN Fuse | 10A | Inflatable Restraint Sensing and Diagnostic Module (SDM), Inflatable Restraint I/P Module Indicator, Inflatable Restraint I/P Module Disable Switch (C99) |
| 38 | AMP Fuse | 30A | Audio Amplifier (UQA) |
| 39 | RDO Fuse | 15A | Digital Radio Receiver (U2K), Radio, Rear Seat Audio (RSA) Control (UK6), Chime Module (UL5) |
| 40 | MISC IGN Fuse | 10A | Auxiliary Body Control Module (XBCM) (EXP), Stop Lamp Switch, Transfer Case Shift Control Module (NQF or NQH), Trailer Brake Control Module (JL1) |
| 41 | L/GATE RELSE Fuse | 15A | Not Used |
| 42 | AIRBAG BATT Fuse | 15A | Inflatable Restraint Passenger Presence System (PPS) Module, Inflatable Restraint Sensing and Diagnostic Module (SDM), Inflatable Restraint Vehicle Rollover Sensor (ASF) |
| 43 | IPC Fuse | 10A | Body Control Module (BCM), Instrument Panel Cluster (IPC) |
| 44 | EXP/PTO Fuse | 15A | Auxiliary Body Control Module (XBCM) (EXP) Power Take Off Relay (PTO) |
| 45 | AUX HVAC-IGN Fuse | 10A | Instrument Panel Cluster (IPC), Inside Rearview Mirror (ISRVM), Heated Steering Wheel Module Control (KA9) |
| 46 | CHMSL Fuse | 15A | Center High Mounted Stop Lamp (CHMSL) |
| 47 | REAR DEFOG Fuse | 30A | Rear Window Defogger Grid |

*(continued on next page)*

## Fuse Block - Underhood Label Usage - Diesel (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 48 | HTD MIR Fuse | 15A | Outside Rearview Mirror - Driver (DL8 or DPN without AN3 or DL3), Outside Rearview Mirror - Passenger (DL8 or DPN without AN3 or DL3) |
| 49 | SEO B1 Fuse | 15A | Auxiliary Body Control Module (XBCM) (EXP), Power Take Off - (PTO) Module, Run Relay (TP2), Security Indicator Lamp, Vehicle Inclination Sensor, Vehicle Shock Sensor |
| 50 | LTR Fuse | 20A | Accessory Power Outlet - I/P 1, Data Link Connector (DLC) |
| 51 | SEO/ALC Fuse | 10A | Not Used |
| 52 | HVAC-IGN Fuse | 10A | Air Temperature Actuator - Left (CJ2), Air Temperature Actuator - Right (CJ2), Air Temperature Actuator (C67), Mode Actuator, Recirculation Actuator (CJ2 or C67) |
| 53 | ECM-IGN Fuse | 15A | Engine Control Module (ECM), Fuel Pump Relay - Secondary (LY6 without NQZ), Fuel System Control Module (FSCM) |
| 54 | ALC/COMP Fuse | 40A | Not Used |
| 55 | HEAVY DUTY ABS Fuse | 60A | Electronic Brake Control Module (EBCM) |
| 56 | ABS - 1 Fuse | 40A | Electronic Brake Control Module (EBCM) |
| 57 | STRTR Fuse | 40A | Starter |
| 58 | STUD-2 Fuse | 30A | Blunt Cut Wire, Integrated Trailer Brake Control Relay (JL1) |
| 59 | LBEC1 Fuse | 60A | BCM Fuse, COOLED SEATS Fuse, DDM Fuse, DIM Fuse, DSM Fuse, REAR HVAC Fuse, RT STOP TRN Fuse, WSW PUMP Fuse CTSY Fuse, PWR MIR Fuse |
| 60 | ELEC RUN BOARD Fuse | 30A | Not Used |
| 61 | WSW/HTR Fuse | 60A | Not Used |
| 62 | TREC Fuse | 30A | Transfer Case Shift Control Module (NQF or NQH), Transfer Case Encoder Motor (NQH) |
| 63 | STUD-1 Fuse | 40A | Trailer Wiring |
| 64 | MBEC1 Fuse | 60A | DRIVER SEAT 2 Circuit Breaker, PASS SEAT 1 Circuit Breaker, PWR REAR WNDW Circuit Breaker, RT DOORS Circuit Breaker |
| 65 | HVAC BLWR Fuse | 40A | Blower Motor Control Module |
| 66 | LGM Fuse | 30A | Not Used |
| 67 | LBEC2 Fuse | 60A | AUX PWR 2 Fuse, REAR WPR Fuse, PDM Fuse, AUX PWR Fuse, REAR SEAT Fuse, STOP LAMPS Fuse, IS LPS Fuse, LT STOP TRN Fuse ABS DET Fuse, LT DR Circuit Breaker, REAR SEAT ENT Fuse, INFO Fuse, LOCK/UNLOCK PCB Relay |
| -- | A/C CMPRSR Relay | -- | A/C CMPRSR Fuse |

*(continued on next page)*

## Fuse Block - Underhood Label Usage - Diesel (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| -- | FOG LAMP Relay | -- | FOG LAMP Fuse |
| -- | FUEL PMP Relay | -- | FUEL PUMP Fuse |
| -- | HDLP LO/HID Relay | -- | LO HDLP - LT Fuse, LO HDLP - RT Fuse, DRL 2 Fuse |
| -- | PRK LAMP Relay | -- | LT PRK Fuse, RT PRK Fuse, TRLR PRK Fuse |
| -- | PWR/TRN Relay | -- | DSL ECM Fuse, ECM/THROT Fuse, ENG Fuse, FUEL HTR Fuse |
| -- | REAR DEFOG Relay | -- | REAR DEFOG Fuse, HTD MIR Fuse |
| -- | RUN/CRNK Relay | -- | AIRBAG IGN Fuse, AUX HVAC-IGN Fuse, HVAC-IGN Fuse, ECM-IGN Fuse, MISC IGN Fuse, SEO/ALC Fuse, TRANS IGN 1 Fuse |
| -- | STRTR Relay | -- | STRTR Fuse |
| Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block. | | | |
| -- | BCK/UP LAMP PCB Relay | -- | VEH BCK/UP Fuse, TRLR BCK/UP Fuse |
| -- | CHMSL | -- | CHMSL Fuse |
| -- | DRL PCB Relay | -- | DRL Fuse |
| -- | FRT WASH PCB Relay | -- | FRT WASH Fuse |
| -- | HI BEAM PCB Relay | -- | HI HEADLAMP - LT Fuse, HI HEADLAMP - RT Fuse |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| -- | HORN PCB Relay | -- | HORN Fuse |
| -- | L/GATE PCB Relay | -- | L/GATE RELSE Fuse |
| -- | LOCK PCB Relay | -- | LCK 2 Fuse (YE9) |
| -- | LOCK/UN-LOCK PCB Relay | -- | LCK 1 Fuse, LCK 2 Fuse, UNLCK 1 Fuse, UNLCK 2 Fuse (AU3 without YE9) |
| -- | REAR WASH PCB Relay | -- | REAR WASH Fuse |
| -- | TRLR LT STOP/TRUN PCB Relay | -- | TRLR STOP LT Fuse |
| -- | TRLR RT STOP/TURN PCB Relay | -- | TRLR STOP RT Fuse |
| -- | UNLOCK PCB Relay | -- | DRV UNLCK Fuse, UNLCK 1 Fuse, UNLCK 2 Fuse |
| -- | WIPER CON-TROL PCB Relay | -- | Windshield Wiper Motor |
| -- | WIPER SPEED PCB Relay | -- | Windshield Wiper Motor |
| Note: Items listed below are Wiper System diagnostic testing points. | | | |
| -- | TP92 | -- | Wiper High Speed Test Point |
| -- | TP95 | -- | Wiper Low Speed Test Point |

## Fuse Block - Underhood Label Usage - Gas

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | TRLR STOP RT Fuse | 10A | Trailer Wiring, Auxilliary Body Control Module (XBCM) (EXP) |
| 2 | ESC/ALC EXH Fuse | 30A | Not Used |
| 3 | TRLR STOP LT Fuse | 10A | Trailer Wiring, Auxilliary Body Control Module (XBCM) (EXP) |
| 4 | ENG Fuse | 15A | Central Sequential Fuel Injection (Central SFI) (LU3), Evaporative Emissions (EVAP) Canister Purge Solenoid Valve (except LU3), Mass Air Flow (MAF)/Intake Air Temperature (IAT) Sensor (except LU3), Valve Lifter Oil Manifold (VLOM) Assembly (LMG, LC9, LZ1 or L96), FAN LO Relay (HP2) |
| 5 | ECM/THROT CONT Fuse | 15A | Engine Control Module (ECM), Evaporative Emission (EVAP) Canister Purse Solenoid Valve (LU3) Mass Air Flow (MAF)/ Intake Air Temperature (IAT) Sensor (LU3) |
| 6 | ITBC Fuse | 15A | Integrated Trailer Brake Control Module (JL1) |
| 7 | FRT WASH Fuse | 15A | Windshield Washer Fluid Pump |
| 8 | O2-B SNSR Fuse | 10A | Heated Oxygen Sensor (HO2S) Bank 1 Sensor 2, Heated Oxygen Sensor (HO2S) Bank 2 Sensor 2 |
| 9 | ABS 2 Fuse | 25A | Electronic Brake Control Module (EBCM) |
| 10 | TRLR BCK/UP Fuse | 10A | Trailer Wiring, Backup Alarm (8S3) |
| 11 | LO HDLP-LT Fuse | 20A | Headlamp - Left Low Beam |
| 12 | ECM-BATT Fuse | 10A | Engine Control Module (ECM) |
| 13 | INJ-B Fuse | 20A | Fuel Injector 2, Fuel Injector 4, Fuel Injector 6, Fuel Injector 8, Ignition Coil 2, Ignition Coil 4, Ignition Coil 6, Ignition Coil 8 (except LU3) |
| 14 | TCM-BATT Fuse | 15A | Transmission Control Module (TCM) (M30), Evaporative Emission (EVAP) Canister Vent Solenoid Valve, Automatic Transmission (MYC, MYD or M99) |
| 15 | VEH BCK/UP Fuse | 10A | Backup Lamp - Left, Backup Lamp - Right |
| 16 | LO HDLP-RT Fuse | 20A | Headlamp - Right Low Beam |
| 17 | A/C CMPRSR Fuse | 10A | A/C Compressor Clutch |
| 18 | O2-A SNSR Fuse | 10A | Heated Oxygen Sensor (HO2S) Bank 1 Sensor 1, Heated Oxygen Sensor (HO2S) Bank 2 Sensor 1 |

*(continued on next page)*

## Fuse Block - Underhood Label Usage - Gas (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 19 | TRANS IGN 1 Fuse | 15A | Transmission Control Module (TCM) (M30), 1-2 Shift Solenoid (SS) Valve, 2-3 Shift Solenoid (SS) Valve, 3-2 Shift Solenoid (SS) Valve (M30), Torque Converter Clutch (TCC) Solenoid Valve (M30), Torque Converter Clutch Pulse Width Modulation (TCC PWM) Solenoid Valve, Input Speed Sensor (ISS), Front Drive Axle Actuator, Automatic Transmission (MYC, MYD or M99), Drive Motor Generator Power inverter module (HP2) |
| 20 | FUEL PUMP Fuse | 25A | Fuel Pump and Sender Assembly - Front, Fuel Pump |
| 21 | FSCM Fuse | 25A | Fuel System Control Module (FSCM) (Gas except LU3 or LY6) |
| 22 | HDLP WASH Fuse | 20A | Not Used |
| 23 | REAR WASH Fuse | 15A | Not Used |
| 24 | INJ-A Fuse | 20A | Fuel Injector 1 (except LU3), Fuel Injector 3 (except LU3), Fuel Injector 5 (except LU3), Fuel Injector 7 (except LU3), Ignition Coil 1 (except LU3), Ignition Coil 3 (except LU3), Ignition Coil 5 (except LU3), Ignition Coil 7 (except LU3), Ignition Control Module (ICM) (LU3) |
| 25 | TRLR PRK Fuse | 15A | Trailer Wiring |
| 26 | LT PRK Fuse | 15A | License Lamp - Left, Marker Lamp - LF (Z88), Park/Turn Signal Lamp - LF Upper, Park/Turn Signal Lamp - LF Lower, Marker Lamp - LR (Z88), Tail/Stop and Turn Signal Lamp - Lower Left, Tail/Stop and Turn Signal Lamp - Upper Left, Clearance Lamp - LF (RO5), Clearance Lamp - LR (R05), Clearance Lamp (U01), Roof Marker Lamp - Left (U01), Roof Marker Lamp - Right (U01) |
| 27 | RT PRK Fuse | 15A | Marker Lamp - RF (Z88), Park/Turn Signal Lamp - RF Upper, Park/Turn Signal Lamp - RF Lower, Tail/Stop and Turn Signal Lamp - Lower Right , Tail/Stop and Turn Signal Lamp - Lower Right , Marker Lamp - RR (Z88), License Lamp - Right, Clearance Lamp - RF (R05), Clearance Lamp - RR (R05), Marker Lamp - Tailgate |
| 28 | FOG LAMP Fuse | 15A | Fog Lamp - Left Front (T96), Fog Lamp - Right Front (T96) |
| 29 | HORN Fuse | 15A | Horn - Left, Horn - Right (7Z1 or YE9) |
| 30 | HI HEAD-LAMP-RT Fuse | 10A | Headlamp - Right High Beam |
| 31 | DRL Fuse | 15A | DRL 2 Fuse |
| 32 | HI HEAD-LAMP-LT Fuse | 10A | Headlamp - Left High Beam |
| 33 | DRL 2 Fuse | 15A | LO HDLP - LT Fuse, LO HDLP - RT Fuse |

*(continued on next page)*

## Fuse Block - Underhood Label Usage - Gas (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 34 | S/ROOF Fuse | 30A | Sunroof Module (CF5), Roof Beacon Relay (TRW) |
| 35 | DLIS Fuse | 2A | Ignition Switch, Theft Deterrent Module (TDM) |
| 36 | FRT WPR Fuse | 25A | WIPER CONTROL PCB Relay |
| 37 | SEO B2 Fuse | 30A | Emergency Vehicle Roof Lamp Relay (5Y0) |
| 38 | EAP Fuse | 15A | PARK ENABLE PCB Relay, ELECTRONIC ADJUSTABLE PEDALS PCB Relay |
| 39 | HVAC BATT Fuse | 10A | HVAC Control Module |
| 40 | AIRBAG IGN Fuse | 10A | Inflatable Restraint Sensing and Diagnostic Module (SDM), Inflatable Restraint I/P Module Indicator, Inflatable Restraint I/P Module Disable Switch (C99) |
| 41 | AMP Fuse | 30A | Audio Amplifier (UQA) |
| 42 | RDO Fuse | 15A | Digital Radio Receiver (U2K), Radio, Rear Seat Audio (RSA) Control (UK6), Chime Module (UL5) |
| 43 | MISC IGN Fuse | 10A | Auxiliary Body Control Module (XBCM) (EXP), Stop Lamp Switch, Transfer Case Shift Control Module (NQF or NQH), Trailer Brake Control Module (JL1), Serial Data Gateway (SDG) Module (HP2) |
| 44 | L/GATE RELSE Fuse | 15A | Not Used |
| 45 | AIRBAG BATT Fuse | 15A | Inflatable Restraint Passenger Presence System (PPS) Module, Inflatable Restraint Sensing and Diagnostic Module (SDM), Inflatable Restraint Vehicle Rollover Sensor (ASF) |
| 46 | IPC Fuse | 10A | Body Control Module (BCM), Instrument Panel Cluster (IPC) |
| 47 | EXP/PTO Fuse | 15A | Auxiliary Body Control Module (XBCM) (EXP)/Power Take Off Relay (PTO) |
| 48 | AUX HVAC-IGN Fuse | 10A | Instrument Panel Cluster (IPC), Inside Rearview Mirror (ISRVM), Heated Steering Wheel Module Control (KA9) |
| 49 | CHMSL Fuse | 15A | Center High Mounted Stop Lamp (CHMSL) |
| 50 | REAR DEFOG Fuse | 30A | Rear Window Defogger Grid |
| 51 | HTD MIR Fuse | 15A | Outside Rearview Mirror - Driver (DL8 or DPN without AN3 or DL3), Outside Rearview Mirror - Passenger (DL8 or DPN without AN3 or DL3) |
| 52 | SEO B1 Fuse | 15A | Auxiliary Body Control Module (XBCM) (EXP), Security Indicator Lamp, Vehicle Inclination Sensor, Vehicle Shock Sensor |
| 53 | LTR Fuse | 20A | Accessory Power Outlet - I/P 1, Data Link Connector (DLC) |
| 54 | SEO/ALC Fuse | 10A | Not Used |

*(continued on next page)*

## Fuse Block - Underhood Label Usage - Gas (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 55 | HVAC-IGN Fuse | 10A | Air Temperature Actuator - Left (CJ2), Air Temperature Actuator - Right (CJ2), Air Temperature Actuator (C67), Mode Actuator, Recirculation Actuator (CJ2 or C67) |
| 56 | ECM-IGN Fuse | 15A | Engine Control Module (ECM), Fuel Pump Relay - Secondary (LY6 without NQZ), Fuel Pump Flow Control Module (Gas except LU3 or LY6), Electronic Brake Control Module (EBCM) (HP2) |
| 57 | FAN-1 Fuse | 40A | FAN LO Relay |
| 58 | ALC/COMP Fuse | 40A | Not Used |
| 59 | HEAVY DUTY ABS Fuse | 60A | Electronic Brake Control Module (EBCM) |
| 60 | FAN-2 Fuse | 40A | FAN HI Relay |
| 61 | ABS-1 Fuse | 40A | Electronic Brake Control Module (EBCM) |
| 62 | STRTR Fuse | 40A | Starter |
| 63 | STUD-2 Fuse | 30A | Blunt Cut Wire, Integrated Trailer Brake Control (JL1) |
| 64 | LBEC1 Fuse | 60A | BCM Fuse, COOLED SEATS Fuse, DDM Fuse, DIM Fuse, DSM Fuse, REAR HVAC Fuse, RT STOP TRN Fuse, WSW PUMP Fuse, CTSY Fuse, PWR MIR Fuse |
| 65 | ELEC RUN BOARD Fuse | 30A | Not Used |
| 66 | WSW/HTR Fuse | 60A | Not Used |
| 67 | TREC Fuse | 30A | Transfer Case Shift Control Module (NQF or NQH), Transfer Case Encoder Motor (NQH) |
| 68 | STUD-1 Fuse | 40A | Trailer Wiring |
| 69 | MBEC1 Fuse | 60A | DRIVER SEAT 2 Circuit Breaker, PASS SEAT 1 Circuit Breaker, PWR REAR WNDW Circuit Breaker, RT DOORS Circuit Breaker |
| 70 | HVAC BLWR Fuse | 40A | Blower Motor Control Module |
| 71 | LGM Fuse | 30A | Not Used |
| 72 | LBEC2 Fuse | 60A | AUX PWR 2 Fuse, REAR WPR Fuse, PDM Fuse, AUX PWR Fuse, REAR SEAT Fuse, STOP LAMPS Fuse, IS LPS Fuse, LT STOP TQN Fuse, OBS DET Fuse, LT DR Circuit Breaker, REAR SEAT ENT Fuse, INFO Fuse, LOCK/UNLCOK PCB Relay |
| -- | A/C CMPRSR Relay | -- | A/C CMPRSR Fuse |
| -- | FAN CNTRL Relay | -- | Cooling Fan Control |
| -- | FAN HI Relay | -- | Cooling Fan - Right |
| -- | FAN LO Relay | -- | Cooling Fan - Left |
| -- | FOG LAMP Relay | -- | FOG LAMP Fuse |
| -- | FUEL PMP Relay | -- | FUEL PUMP Fuse |

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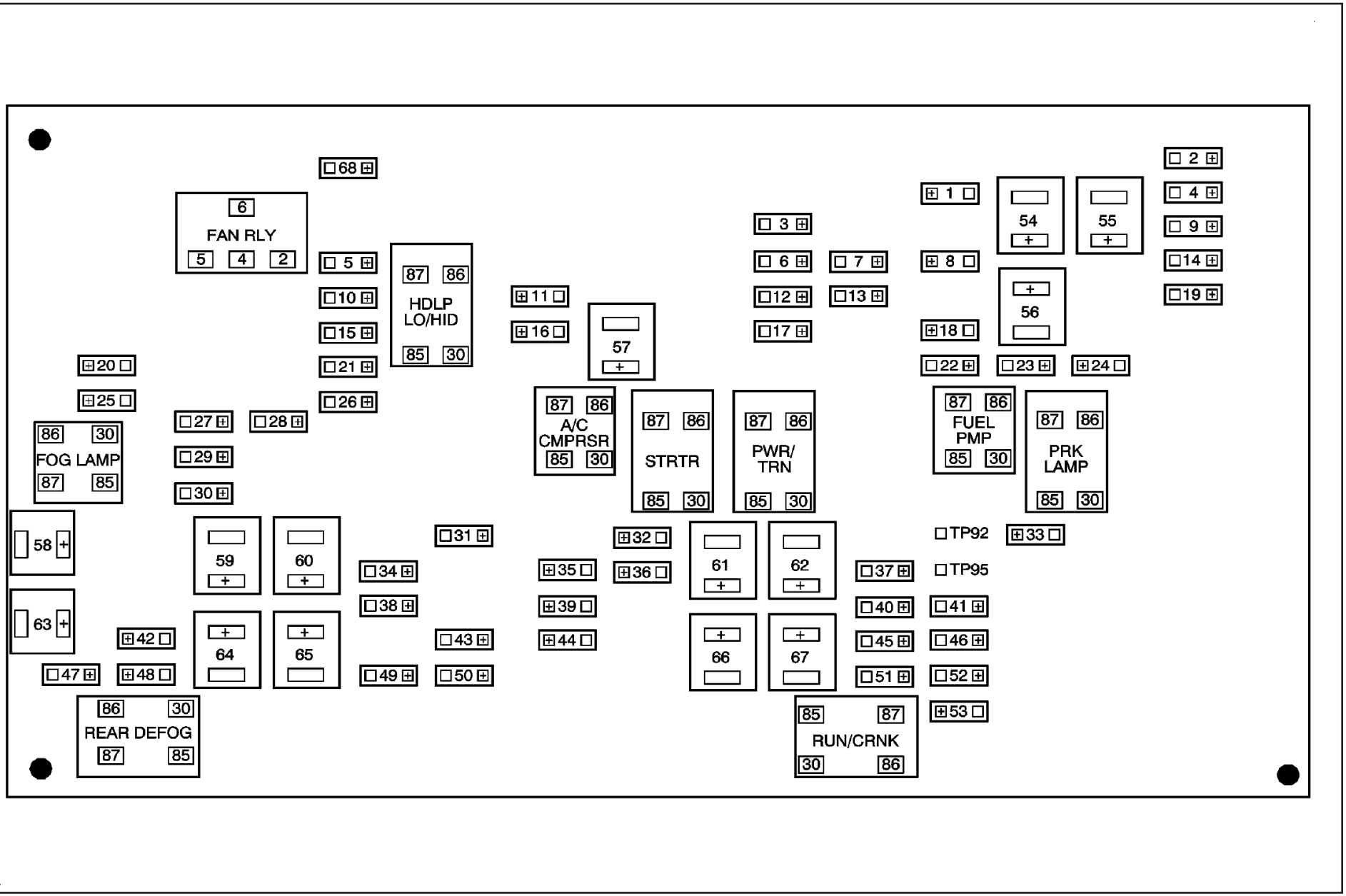
## Fuse Block - Underhood Label Usage - Gas (cont'd)

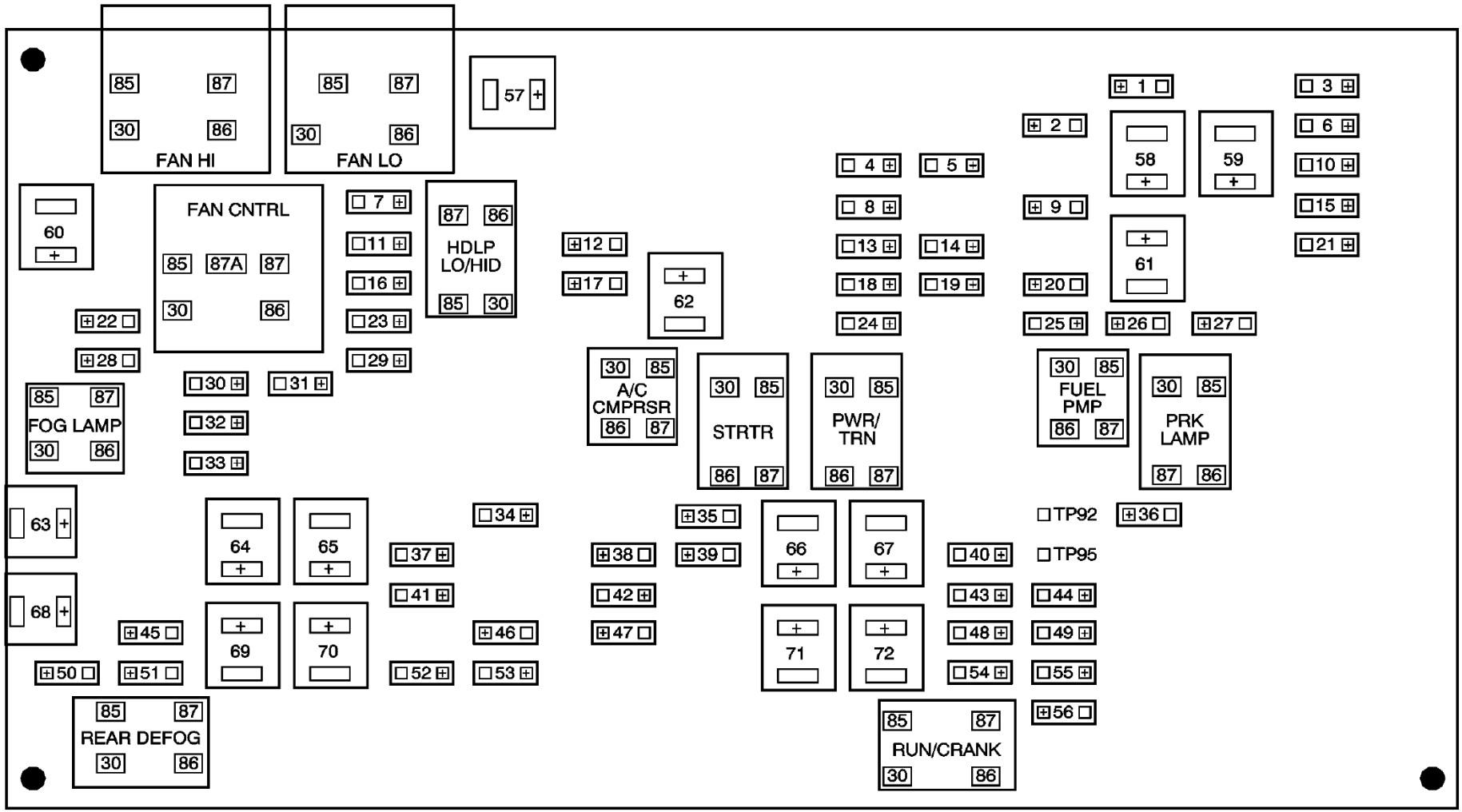
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| -- | HDLP LO/HID Relay | -- | LO HDLP - LT Fuse, LO HDLP - RT Fuse, DRL 2 Fuse |
| -- | PRK LAMP Relay | -- | LT PRK Fuse, RT PRK Fuse, TRLR PRK Fuse |
| -- | PWR/TRN Relay | -- | ECM/THROT CONT Fuse, ENG Fuse, INJ-A Fuse, INJ-B Fuse, O2-A SNSR Fuse, O2-B SNSR Fuse, FAN CNRTL PCB Relay, FAN HI PCB Relay, FAN LO PCB Relay |
| -- | REAR DEFOG Relay | -- | REAR DEFOG Fuse, HTD MIR Fuse |
| -- | RUN/CRNK Relay | -- | AIRBAG IGN Fuse, AUX HVAC-IGN Fuse, HVAC-IGN Fuse, ECM-IGN Fuse, MISC IGN Fuse, SEO/ALC Fuse, TRANS IGN 1 Fuse |
| -- | STRTR Relay | -- | STRTR Fuse |
| Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block. | | | |
| -- | BCK/UP LAMP PCB Relay | -- | VEH BCK/UP Fuse, TRLR BCK/UP Fuse |
| -- | CHMSL Relay | -- | CHMSL Fuse |
| -- | DRL PCB Relay | -- | DRL Fuse |
| -- | FRT WASH PCB Relay | -- | FRT WASH Fuse |
| -- | HI BEAM PCB Relay | -- | HI HEADLAMP - LT Fuse, HI HEADLAMP - RT Fuse |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| -- | HORN PCB Relay | -- | HORN Fuse |
| -- | L/GATE PCB Relay | -- | L/GATE RELSE Fuse |
| -- | LOCK PCB Relay | -- | LCK 2 Fuse (YE9) |
| -- | LOCK/UN-LOCK PCB Relay | -- | LCK 1 Fuse, LCK 2 Fuse, UNLCK 1 Fuse, UNLCK 2 Fuse (AU3 without YE9) |
| -- | REAR WASH PCB Relay | -- | REAR WASH Fuse |
| -- | TRLR LT STOP/TURN PCB Relay | -- | TRLR STOP LT Fuse |
| -- | TRLR RT STOP/TURN PCB Relay | -- | TRLR STOP RT Fuse |
| -- | UNLOCK PCB Relay | -- | DRV UNLCK Fuse, UNLCK 1 Fuse, UNLCK 2 Fuse |
| -- | WIPER CON-TROL PCB Relay | -- | Windshield Wiper Motor |
| -- | WIPER SPEED PCB Relay | -- | Windshield Wiper Motor |
| Note: Items listed below are Wiper System diagnostic testing points. | | | |
| -- | TP92 | -- | Wiper High Speed Test Point |
| -- | TP95 | -- | Wiper Low Speed Test Point |

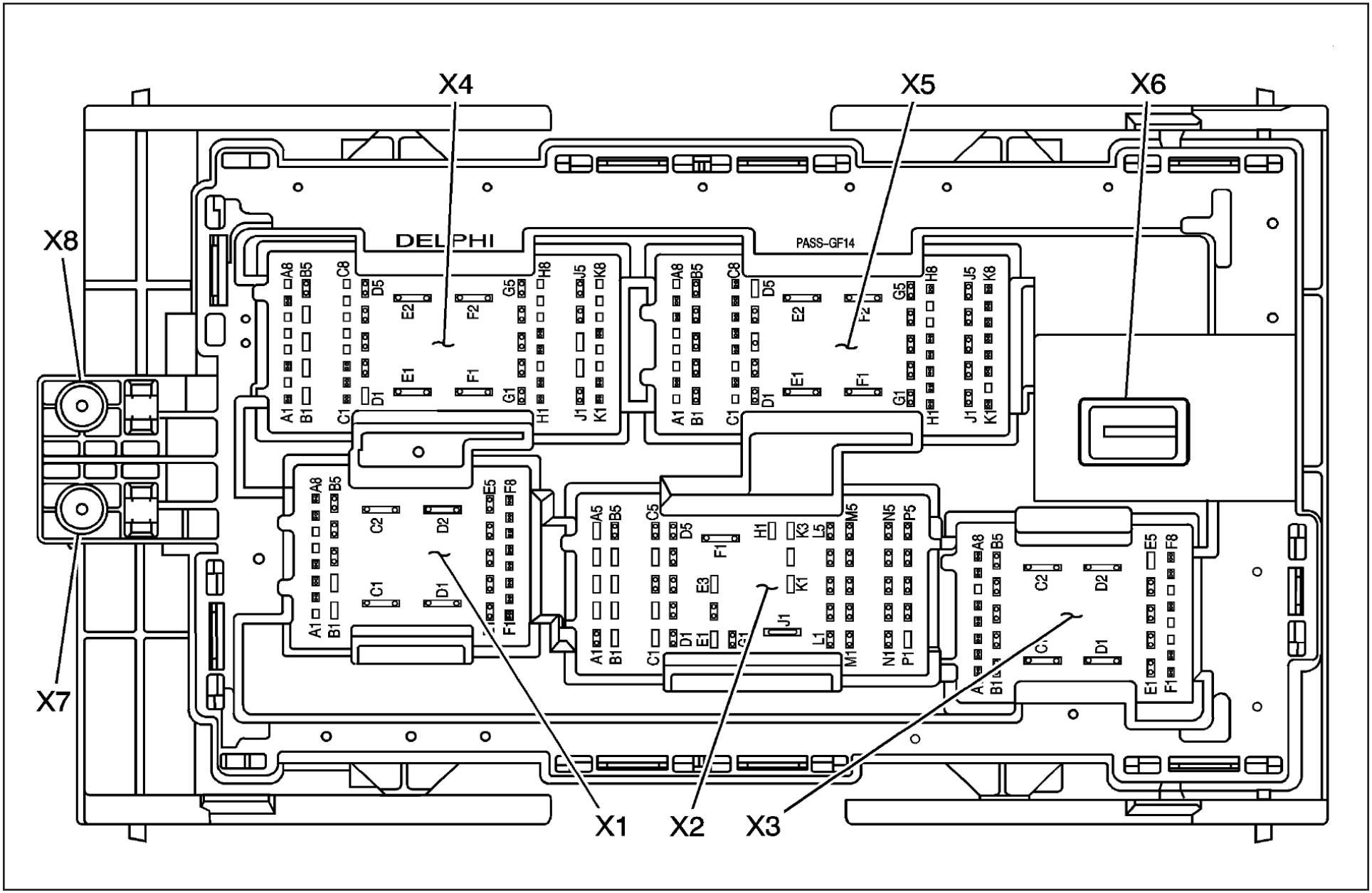
## Fuse Block - Underhood Top View - Diesel



## Fuse Block - Underhood Top View - Gas

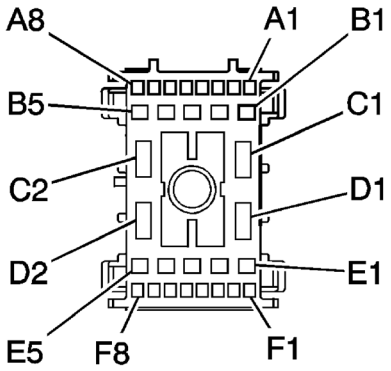


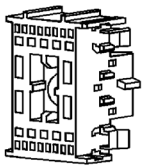
## Fuse Block - Underhood Bottom View



# Fuse Block - Underhood X1

**Connector Part Information**



Harness:
Forward Lamp

OEM: 13513343

Service: 19115674

Description: 30-Way F GT 150 280 Metri-Pack Series (GY)

**Terminal Part Information**

Pins: A1, A2, A4, E2, E3

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: A2, A3, A7, A8, E1, E5, F5, F8

Terminal/Tray: 15496302/5

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: B1

Terminal/Tray: 13525969/4

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B3

Terminal/Tray: 13525970/4

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B5

Terminal/Tray: 13525969/4

Core/Insulation Crimp: See Terminal Repair Kit

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: C1, C2, D1, D2

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Release Tool/Test Probe: 12150860/J-35616-44 (YE)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | 0.8 BK | 250 | Ground |
| A2 | 0.8 L-BU/WH | 1314 | Left Front Turn Signal Lamp Supply Voltage |
| A3 | 0.5 D-BU | 545 | DRL Supply Voltage (T61) |
| A4 | 0.8 D-BU/WH | 1315 | Right Front Turn Signal Lamp Supply Voltage |
| A5-A6 | -- | -- | Not Used |
| A7 | 0.5 L-GN/BK | 311 | Right Headlamp High Beam Supply Voltage |
| A8 | 0.5 D-GN/WH | 711 | Left Headlamp High Beam Supply Voltage |
| B1-B2 | -- | -- | Not Used |
| B3 | 0.5 D-BU | 545 | DRL Supply Voltage (T61) |
| B4 | -- | -- | Not Used |

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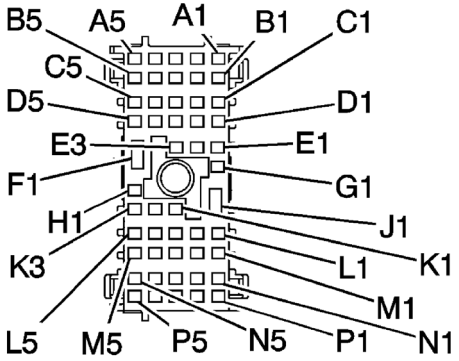
## Fuse Block - Underhood X1 (cont'd)

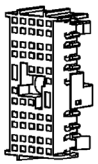
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| B5 | 0.8 PU | 2234 | Front Fog Lamp Supply Voltage (T96) |
| | 0.8 PU | 2234 | Front Fog Lamp Supply Voltage (T96) |
| C1 | 5 GY | 532 | Cooling Fan Motor Supply Voltage (Gas except LY6 or HP2) |
| C2 | 5 YE | 5358 | Cooling Fan Motor Supply Voltage (Gas except LY6 or HP2) |
| D1 | 5 L-BU | 409 | Cooling Fan Motor Supply Voltage (Gas except LY6 or HP2) |
| D2 | 5 BK | 150 | Ground (10 Series except HP2) |
| E1 | 0.5 OG | 228 | Windshield Washer Pump Control |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| E2 | 0.8 YE | 712 | Left Headlamp Low Beam Supply Voltage |
| E3 | 0.8 TN/WH | 312 | Right Headlamp Low Beam Supply Voltage |
| E4 | -- | -- | Not Used |
| E5 | 0.5 D-GN | 29 | Horn Control |
| | 0.5 D-GN | 29 | Horn Control |
| F1-F4 | -- | -- | Not Used |
| F5 | 0.5 BN | 2609 | Right Front Park Lamps Supply Voltage |
| F6-F7 | -- | -- | Not Used |
| F8 | 0.5 BN | 2509 | Left Front Park Lamps Supply Voltage |

# Fuse Block - Underhood X2

**Connector Part Information**



Harness: Engine (Gas)

Harness: Engine Chassis (Diesel)

OEM: 13513347

Service: 19115659

Description: 50-Way F GT 280 Metri-Pack Series (BK)

**Terminal Part Information**

Pins: A1, A5, B4, B5, C3, C5, D3, D4, L1, L2, M1, N1, P1, P2, P4, P5

Pins: L4, N3 (Gas)

Pins: N4 (Gas or Diesel without NQF or NQG)

Pins: P3 (Gas or Diesel without PTO)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: D4, L3, N3 (Diesel)

Pin: N4 (Diesel with NQF or NQG)

Pin: P3 (Diesel with PTO)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: L5, M2

Pin: D4 (Gas)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: F1

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Release Tool/Test Probe: 12150860/J-35616-44 (YE)

Pins: M3, M4, M5

Pin: L3 (Gas)

Terminal/Tray: 13525969/4

Core/Insulation Crimp: See Terminal Repair Kit

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pin: N5

Pin: L4 (Diesel)

Terminal/Tray: 13525969/4

Core/Insulation Crimp: 4/4

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | 0.35 D-GN | 335 | Low Speed Cooling Fan Relay Control (Gas except LY6 or HP2) |
| | 0.5 WH/BK | 2366 | Cooling Fan Control Relay Speed Signal (Diesel) |
| A2-A4 | -- | -- | Not Used |
| A5 | 0.5 RD/WH | 4540 | Battery Positive Voltage (TP2) |

*(continued on next page)*

## Fuse Block - Underhood X2 (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| B1-B3 | -- | -- | Not Used |
| B4 | 0.5 OG | 300 | Ignition 3 Voltage (TP2 or HP2) |
| B5 | 0.35 D-BU/ WH | 473 | High Speed Cooling Fan Relay Control (Gas except LY6 or HP2) |
| C1-C2 | -- | -- | Not Used |
| C3 | 0.35 D-GN/ WH | 459 | A/C Compressor Clutch Relay Control (Except HP2) |
| C4 | -- | -- | Not Used |
| C5 | 0.5 YE/BK | 625 | Starter Enable Relay Control (Except HP2) |
| D1-D2 | -- | -- | Not Used |
| D3 | 0.5 RD/WH | 440 | Battery Positive Voltage |
| D4 | 0.8 D-GN | 59 | A/C Compressor Clutch Supply Voltage (C67 or CJ2 except HP2) |
| D5 | -- | -- | Not Used |
| E1-E3 | -- | -- | Not Used |
| F1 | 3 PU | 6 | Starter Solenoid Crank Voltage (Except HP2) |
| G1 | -- | -- | Not Used |
| H1 | -- | -- | Not Used |
| J1 | -- | -- | Not Used |
| K1-K3 | -- | -- | Not Used |
| L1 | 0.5 PK | 1839 | Ignition 1 Voltage (LMG, LC9, L96 or HP2) |
| | 0.5 PK | 1839 | Ignition 1 Voltage (HP2) |
| L2 | 0.5 PK/BK | 1539 | Ignition 1 Voltage (Gas) |
| | 0.5 PK/BK | 1539 | Ignition 1 Voltage (Gas) |
| L3 | 0.8 PK/WH | 1239 | Ignition 1 Voltage (Gas except LU3) |
| | 0.8 PK/WH | 1239 | Ignition 1 Voltage (Gas except LU3) |
| | 0.5 PK | 2339 | Ignition 1 Voltage (Diesel) |
| L4 | 0.5 PK | 539 | Ignition 1 Voltage (Gas) |
| | 0.5 PK | 539 | Ignition 1 Voltage (Gas) |
| | 2 PK/BK | 1439 | Ignition 1 Voltage (Diesel) |
| L5 | 1 PK | 1039 | Ignition 1 Voltage (Gas) |
| | 0.5 PK | 1339 | Ignition 1 Voltage (Diesel) |
| M1 | 0.5 PK | 1839 | Ignition 1 Voltage (Gas) |
| | 0.5 PK | 1839 | Ignition 1 Voltage (Gas except LU3) |
| M2 | 1 PK | 1239 | Ignition 1 Voltage (Gas except LU3) |
| | 0.5 PK | 1839 | Ignition 1 Voltage (Diesel) |
| M3 | 0.8 PK | 1239 | Ignition 1 Voltage (Gas except LU3) |
| | 0.8 PK | 1239 | Ignition 1 Voltage (Gas except LU3) |
| M4 | 0.8 PK/BK | 1039 | Ignition 1 Voltage (Gas except LU3) |
| | 0.8 PK/BK | 1039 | Ignition 1 Voltage (Gas except LU3) |
| | 2 PK | 1439 | Ignition 1 Voltage (Diesel) |
| M5 | 0.8 PK | 1039 | Ignition 1 Voltage (Gas except LU3) |
| | 0.8 PK | 1039 | Ignition 1 Voltage (Gas except LU3) |
| | 2 PK | 1439 | Ignition 1 Voltage (Diesel) |

*(continued on next page)*

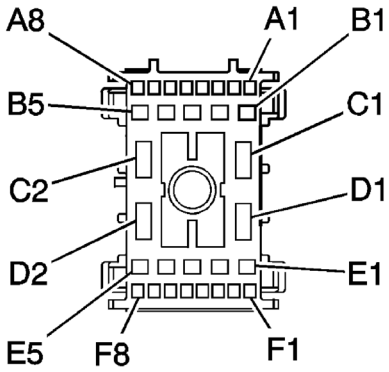
## Fuse Block - Underhood X2 (cont'd)

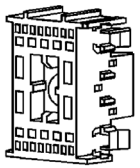
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| N1 | 0.5 PK | 1339 | Ignition 1 Voltage (Gas) |
| N2 | -- | -- | Not Used |
| N3 | 0.5 RD/WH | 1840 | Battery Positive Voltage |
| | 0.5 RD/WH | 1840 | Battery Positive Voltage (MW7) |
| N4 | 0.5 PK/WH | 2139 | Ignition 1 Voltage |
| | 0.5 PK/WH | 2139 | Ignition 1 Voltage (except NQF, NQG or NQH, and NQG or NQH with MYD) |
| N5 | 2 BK | 550 | Ground |
| P1 | 0.5 PK/BK | 1339 | Ignition 1 Voltage (LU3 or HP2) |
| | 0.5 PK | 1339 | Ignition 1 Voltage (LU3) |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| P2 | 0.35 YE | 5991 | Powertrain Relay Coil Control |
| P3 | 0.5 L-BU/WH | 6311 | Cruise/ETC/TCC Brake Signal |
| | 0.5 L-BU/WH | 6311 | Cruise/ETC/TCC Brake Signal (Gas except HP2 or Diesel with PTO) |
| P4 | 0.35 D-GN/WH | 465 | Fuel Pump Relay Control (LU3, LY6 or Diesel with 31 Series and without NQZ) |
| P5 | 0.5 PK | 439 | Ignition 1 Voltage |

# Fuse Block - Underhood X3

**Connector Part Information**



Harness:
Chassis

OEM: 13513342

Service: 19115657

Description: 30-Way F GT 150 280 Metri-Pack Series (BK)

**Terminal Part Information**

Pins: A1, A2, A7, F1, F2, F7

Terminal/Tray: 15496302/5

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: A5, F5

Terminal/Tray: 15496302/5

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: B3, B5

Pins: E1 (JL1 or LY6)

Terminal/Tray: 13525969/4

Core/Insulation Crimp: 4/4

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B4, E2, E3

Pins: E1 (Diesel)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: C2

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Release Tool/Test Probe: 12150860/J-35616-44 (YE)

Pin: E4

Terminal/Tray: 13525969/4

Core/Insulation Crimp: F/D

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | 0.8 D-GN | 19 | Right Rear Stop/Turn Lamp Supply Voltage |
| A2 | 0.8 YE | 18 | Left Rear Stop/Turn Lamp Supply Voltage |
| A3 | 0.5 D-BU | 38 | Backup Lamp Relay Control (UVC) |
| A4 | -- | -- | Not Used |
| A5 | 0.5 RD/WH | 1840 | Battery Positive Voltage (Gas) |
| A6 | -- | -- | Not Used |
| A7 | 0.8 BN | 2509 | Left Rear Park Lamps Supply Voltage |
| A8 | -- | -- | Not Used |
| B1-B2 | -- | -- | Not Used |

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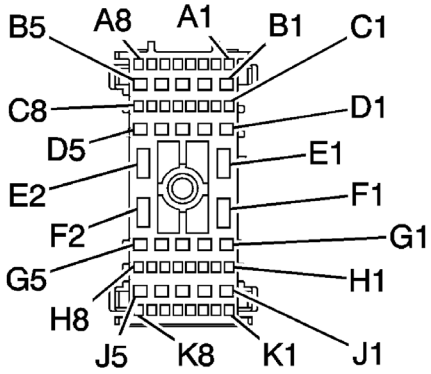
## Fuse Block - Underhood X3 (cont'd)

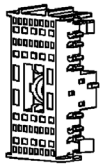
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| B3 | 2 RD | 1640 | Battery Positive Voltage (JL4, JF3 or JF7 with 10 Series) |
| B4 | 1 BN | 2109 | Trailer Park Lamps Supply Voltage (except MEX or EXP) |
| | 0.8 BN | 2109 | Trailer Park Lamps Supply Voltage (EXP) |
| B5 | 2 GY | 120 | Fuel Pump Supply Voltage (LU3, LMG, LC9, LY6 or Diesel with 31 Series and without NQZ) |
| C1 | -- | -- | Not Used |
| C2 | 3 RD/BK | 442 | Battery Positive Voltage (except MEX) |
| D1 | 5 RD/BK | 1742 | Battery Positive Voltage |
| D2 | -- | -- | Not Used |
| E1 | 2 RD/WH | 4340 | Battery Positive Voltage (JL1 or LY6) |
| | 0.8 D-GN | 1619 | Trailer Right Rear Turn/Stop Lamp Supply Voltage (Diesel) |
| E2 | 1 L-GN | 1624 | Trailer Backup Lamps Supply Voltage (except MEX or EXP) |
| E3 | 0.8 L-GN | 24 | Backup Lamp Supply Voltage |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| E4 | 3 RD/WH | 1940 | Battery Positive Voltage (LU3, LMG, LC9 or LY6) |
| | 2 RD/WH | 4340 | Battery Positive Voltage (JL1 with Diesel) |
| E5 | -- | -- | Not Used |
| F1 | 0.35 YE | 1618 | Trailer Left Rear Turn/Stop Lamp Supply Voltage (except MEX, EXP or HP2) |
| | 0.8 YE | 1618 | Trailer Left Rear Turn/Stop Lamp Supply Voltage (EXP or HP2) |
| F2 | 0.8 D-GN | 1619 | Trailer Right Rear Turn/Stop Lamp Supply Voltage (Gas with EXP or Gas without MEX or EXP) |
| F3-F4 | -- | -- | Not Used |
| F5 | 0.5 PK | 439 | Ignition 1 Voltage (Gas except LY6 with NQZ) |
| F6 | -- | -- | Not Used |
| F7 | 0.8 BN | 2609 | Right Rear Park Lamps Supply Voltage |
| F8 | 0.8 GY | 5185 | Right Trailer Park Lamp (EXP) |

# Fuse Block - Underhood X4

**Connector Part Information**



Harness:
Instrument Panel

OEM: 13513329

Service: 19115656

Description: 56-Way F GT 150 280 Metri-Pack Series (BK)

**Terminal Part Information**

Pins: A1, A3, A7, C1, C2, C3, H4, K2, K5

Terminal/Tray: 15496302/5

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: B5, G2, G3, J1

Terminal/Tray: 13525969/4

Core/Insulation Crimp: F/D

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins D4, G1, J4

Terminal/Tray: 13525970/4

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: D5, H1, H5, K5

Terminal/Tray: 15496302/5 15496302/5

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: E1, E2, F2

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Release Tool/Test Probe: 12150860/J-35616-44 (YE)

Pins: G5

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: J5

Terminal/Tray: 13525969/4

Core/Insulation Crimp: See Terminal Repair Kit

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | 0.5 L-BU/WH | 1314 | Left Front Turn Signal Lamp Supply Voltage |
| A2 | -- | -- | Not Used |
| A3 | 0.5 OG | 2268 | Windshield Washer Relay Control |
| A4-A6 | -- | -- | Not Used |
| A7 | 0.35 WH | 193 | Rear Defog Relay Control (C49 or HP2) |
| A8 | -- | -- | Not Used |

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## Fuse Block - Underhood X4 (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| B1-B4 | -- | -- | Not Used |
| B5 | 3 PU | 293 | Rear Defog Element Supply Voltage (C49 or HP2) |
| C1 | 0.5 D-BU/WH | 1315 | Right Front Turn Signal Lamp Supply Voltage (except DL3, DPN or HP2) |
| | 0.8 D-BU/WH | 1315 | Right Front Turn Signal Lamp Supply Voltage (DL3, DPN or HP2) |
| C2 | 0.35 D-GN/WH | 1317 | Fog Lamp Relay Control (T96 or HP2) |
| C3 | 0.35 TN/WH | 1969 | Headlamp High Beam Relay Control |
| C4-C8 | -- | -- | Not Used |
| D1-D3 | -- | -- | Not Used |
| D4 | 0.5 RD/WH | 4440 | Battery Positive Voltage |
| D5 | 0.5 OG | 2267 | Mirror Heating Element Supply Voltage (HP2, DL8 or DPN without AN3 or DL3) |
| E1 | 5 RD/BK | 842 | Battery Positive Voltage |
| E2 | 5 RD/BK | 642 | Battery Positive Voltage (YE9 or HP2) |
| F1 | -- | -- | Not Used |
| F2 | 5 RD/BK | 542 | Battery Positive Voltage |
| G1 | 0.35 TN | 28 | Horn Relay Control |
| G2 | 3 RD/WH | 2340 | Battery Positive Voltage (except MEX) |
| G3 | 3 RD/WH | 3740 | Battery Positive Voltage (except MEX) |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| G4 | -- | -- | Not Used |
| G5 | 0.8 RD/WH | 4540 | Battery Positive Voltage (except MEX) |
| H1 | 0.5 BN | 2509 | Left Right Park Lamps Supply Voltage (except MEX or 8S8) |
| H2-H3 | -- | -- | Not Used |
| H4 | 0.35 L-GN/BK | 592 | DRL Relay Control (except MEX) |
| H5 | 1 D-GN | 19 | Right Rear Stop/Turn Lamp Supply Voltage |
| H6-H8 | -- | -- | Not Used |
| J1 | 3 RD/WH | 3140 | Battery Positive Voltage (except MEX) |
| J2-J3 | -- | -- | Not Used |
| J4 | 0.35 RD/WH | 2840 | Battery Positive Voltage |
| | 0.35 RD/WH | 2840 | Battery Positive Voltage (except MEX) |
| J5 | 0.8 RD/WH | 640 | Battery Positive Voltage |
| | 0.8 RD/WH | 640 | Battery Positive Voltage |
| K1 | -- | -- | Not Used |
| K2 | 0.35 PK/WH | 1970 | Headlamp Low Beam Relay Control |
| K3-K4 | -- | -- | Not Used |
| K5 | 1 YE | 18 | Left Rear Stop/Turn Lamp Supply Voltage |
| K6-K8 | -- | -- | Not Used |

# Fuse Block - Underhood X5

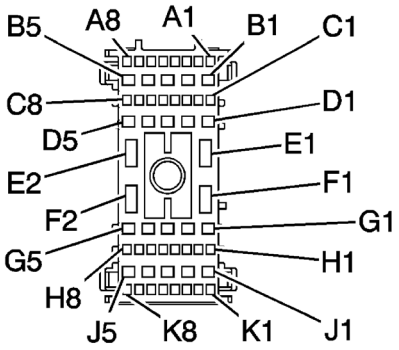
**Connector Part Information**

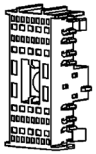
Harness:
Instrument Panel

OEM: 13513345

Service: 19115658

Description: 56-Way F GT 150 280 Metri-Pack Series (GY)



**Terminal Part Information**

Pins: A2, B1, B2, B4, C4, C5, C7, C8, D1, D2, G2, G3, G3, G4, G5, H1, H3, H5, H8, J4, J5, K1, K3, K6

Terminal/Tray: 15496302/5

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: G1, J1, J2

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: E1, F1

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Release Tool/Test Probe: 12150860/J-35616-44 (YE)

Pin: B3 (except Y91, MEX or 8S8)

Pin: F1

Terminal/Tray: 12092445/18

Core/Insulation Crimp: See Terminal Repair Kit

Release Tool/Test Probe: 12150860/J-35616-44 (YE)

Pin: B3 (Y91, MEX or 8S8)

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | -- | -- | Not Used |
| A2 | 0.35 L-BU/WH | 6311 | Cruise/ETC/TCC Brake Signal |
| A3-A8 | -- | -- | Not Used |
| B1 | 0.35 L-BU/WH | 6311 | TCC Brake Signal |
| | 0.35 L-BU/WH | 6311 | TCC Brake Signal |
| B2 | 0.5 RD/WH | 740 | Battery Positive Voltage (YE9, Y91 or HP2) |
| B3 | 1 RD/WH | 340 | Battery Positive Voltage |
| | 1 RD/WH | 340 | Battery Positive Voltage (except Y91, MEX or 8S8) |
| B4 | 0.5 RD/WH | 2640 | Battery Positive Voltage (PTO or EXP) |
| B5 | -- | -- | Not Used |
| C1-C3 | -- | -- | Not Used |
| C4 | 0.35 OG | 300 | Ignition 3 Voltage |
| C5 | 0.35 OG | 300 | Ignition 3 Voltage |
| C6-C7 | -- | -- | Not Used |
| C8 | 0.35 D-BU | 45 | Park Lamp Relay Supply Voltage |

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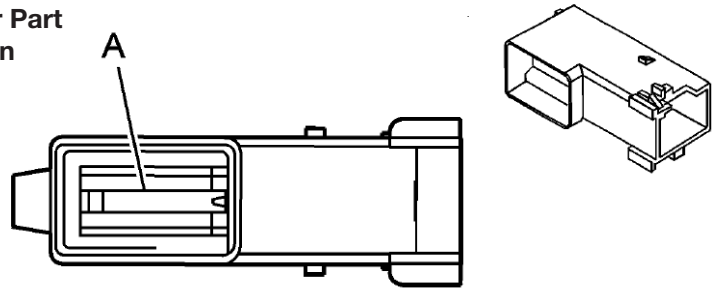
## Fuse Block - Underhood X5 (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| D1 | 0.35 RD/WH | 540 | Battery Positive Voltage |
| D2 | 0.35 RD/WH | 3340 | Battery Positive Voltage |
| D3-D5 | -- | -- | Not Used |
| E1-E2 | -- | -- | Not Used |
| F1 | 3 RD/BK | 1342 | Battery Positive Voltage (NQF or NQH) |
| | 3 RD/BK | 1342 | Battery Positive Voltage (NQH) |
| F2 | 5 RD/BK | 42 | Battery Positive Voltage |
| G1 | 1 BK | 550 | Ground |
| G2 | 0.35 PK | 1139 | Ignition 1 Voltage |
| G3 | 0.35 PK | 239 | Ignition 1 Voltage |
| G4 | 0.35 PK | 1639 | Ignition 1 Voltage (DF5 or KA9) |
| | 0.35 PK | 1639 | Ignition 1 Voltage (with MEX or except KA9) |
| G5 | 0.35 PK | 739 | Ignition 1 Voltage |
| H1 | 0.35 OG | 5186 | Left Trailer Turn Signal Lamp Control |
| H2 | 0.35 YE | 1618 | Trailer Left Rear Turn/Stop Lamp Supply Voltage (EXP) |
| H3 | 0.35 YE | 5187 | Right Trailer Turn Signal Lamp Control |
| H4 | 0.35 D-GN | 1619 | Trailer Right Rear Turn/Stop Lamp Supply Voltage (EXP) |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| H5 | 0.35 YE | 5199 | Run/Crank Relay Coil Control |
| H6-H7 | -- | -- | Not Used |
| H8 | 0.35 D-BU | 38 | Backup Lamp Relay Control |
| J1 | 1 PU | 92 | Windshield Wiper Motor High Speed |
| J2 | 1 D-GN | 95 | Windshield Washer Switch Signal |
| J3 | -- | -- | Not Used |
| J4 | 0.5 OG | 1054 | Stop Lamp Supply Voltage Signal |
| J5 | 0.35 PK | 839 | Ignition 1 Voltage |
| K1 | 0.35 TN | 860 | Front Windshield Wiper Switch High Signal Control |
| K2 | -- | -- | Not Used |
| K3 | 0.35 GY | 91 | Windshield Wiper Switch Signal 2 |
| K4 | -- | -- | Not Used |
| K5 | 0.35 D-BU | 38 | Backup Lamp Relay Control (UVC) |
| K6 | 0.5 L-BU | 1320 | CHMSL Supply Voltage/Stop Lamp Supply Voltage |
| K7-K8 | -- | -- | Not Used |

# Fuse Blocks - Underhood X6, X7 (except TP2), X7 (TP2), X8 (except JL1), X8 (JL1)

**Fuse Block - Underhood X6**
**Connector Part Information**




Harness: Battery Positive

OEM: 15488459

Service: Service by Harness - See Part Catalog

Description: 1-Way F High Power Series (BK)

**Terminal Part Information**

Terminal/Tray: See Terminal Repair Kit

Core/Insulation Crimp: See Terminal Repair Kit

Release Tool/Test Probe: See Terminal Repair Kit )

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 19 RD | 2 | Battery Positive Voltage |

**Fuse Block - Underhood X7 (except TP2)**
**Terminal Part Information**

Harness: Chassis

Terminal: 12162099

Core/Insulation Crimp: G/G

Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 3 RD/BK | 742 | Battery Positive Voltage |

**Fuse Block - Underhood X7 (TP2)**
**Terminal Part Information**

Harness: Auxiliary Battery Positive

Terminal: 12146912

Core/Insulation Crimp: N/A

Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.8 RD/BK | 742 | Battery Positive Voltage |

**Fuse Block - Underhood X8 (except JL1)**
**Terminal Part Information**

Harness: Instrument Panel

Terminal: 12103506

Core/Insulation Crimp: N/A

Description: Ring Battery Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 3 RD/BK | 242 | Battery Positive Voltage |

**Fuse Block - Underhood X8 (JL1)**
**Terminal Part Information**

Harness: Chassis

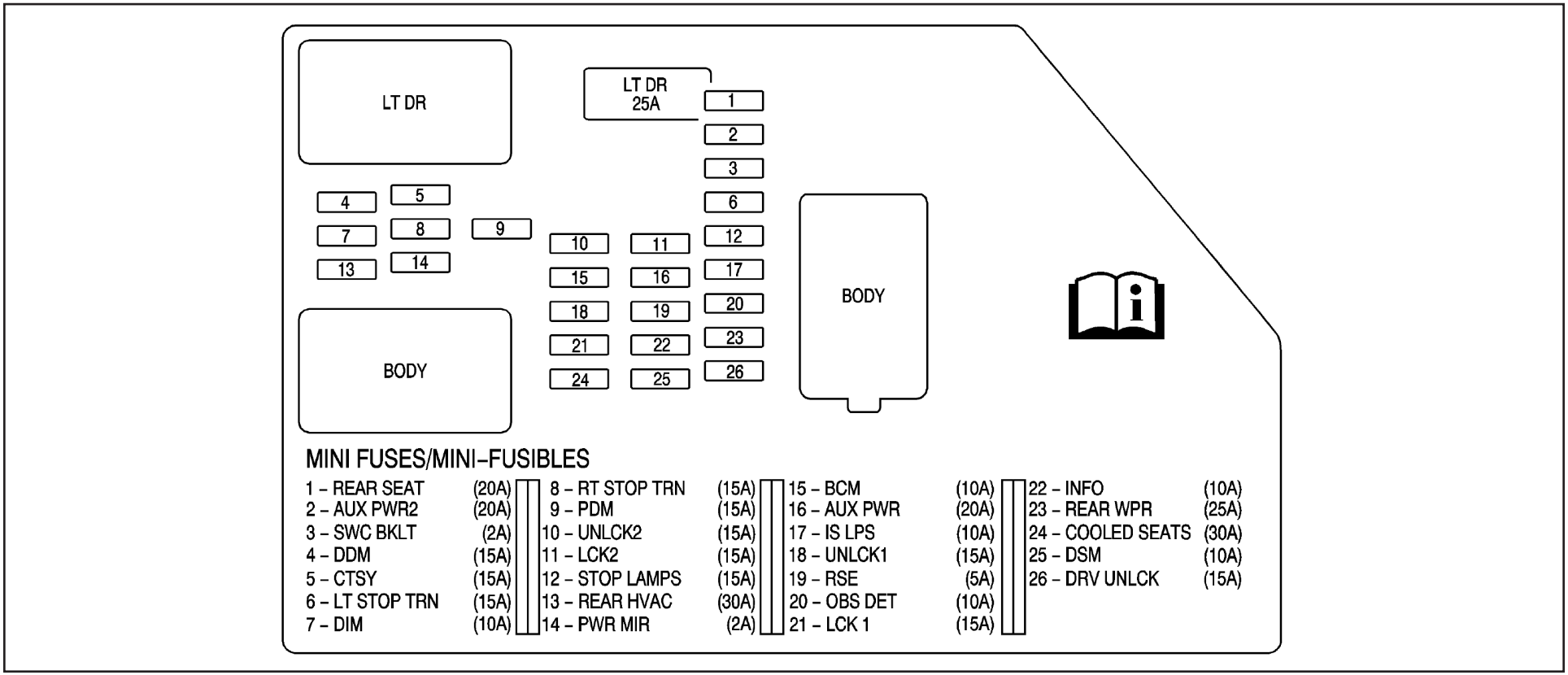
Terminal: 12103506

Core/Insulation Crimp: N/A

Description: Ring Battery Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 3 RD/BK | 242 | Battery Positive Voltage |

## Fuse Block - I/P Label




| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | REAR SEAT Fuse | 20A | Not Used |
| 2 | AUX PWR2 Fuse | 20A | Accessory Power Outlet - Center Console (D07 with UQ3), Accessory power Outlet - Center Console Compartment (D07 with UQ3), Accessory Power Outlet - Center Seat (AZ3) |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 3 | SWC BKLT Fuse | 2A | Steering Wheel Control Switch Assembly - Left, Steering Wheel Control Switch Assembly - Right |
| 4 | DDM Fuse | 15A | Door Lock/Window Switch - Driver (AN3 or DL3) |
| 5 | CTSY Fuse | 15A | Body Control Module (BCM) |
| 6 | LT STOP TRN Fuse | 15A | Body Control Module (BCM) (except TZ0), Trailer Stop/Turn Relay (TZ0) |

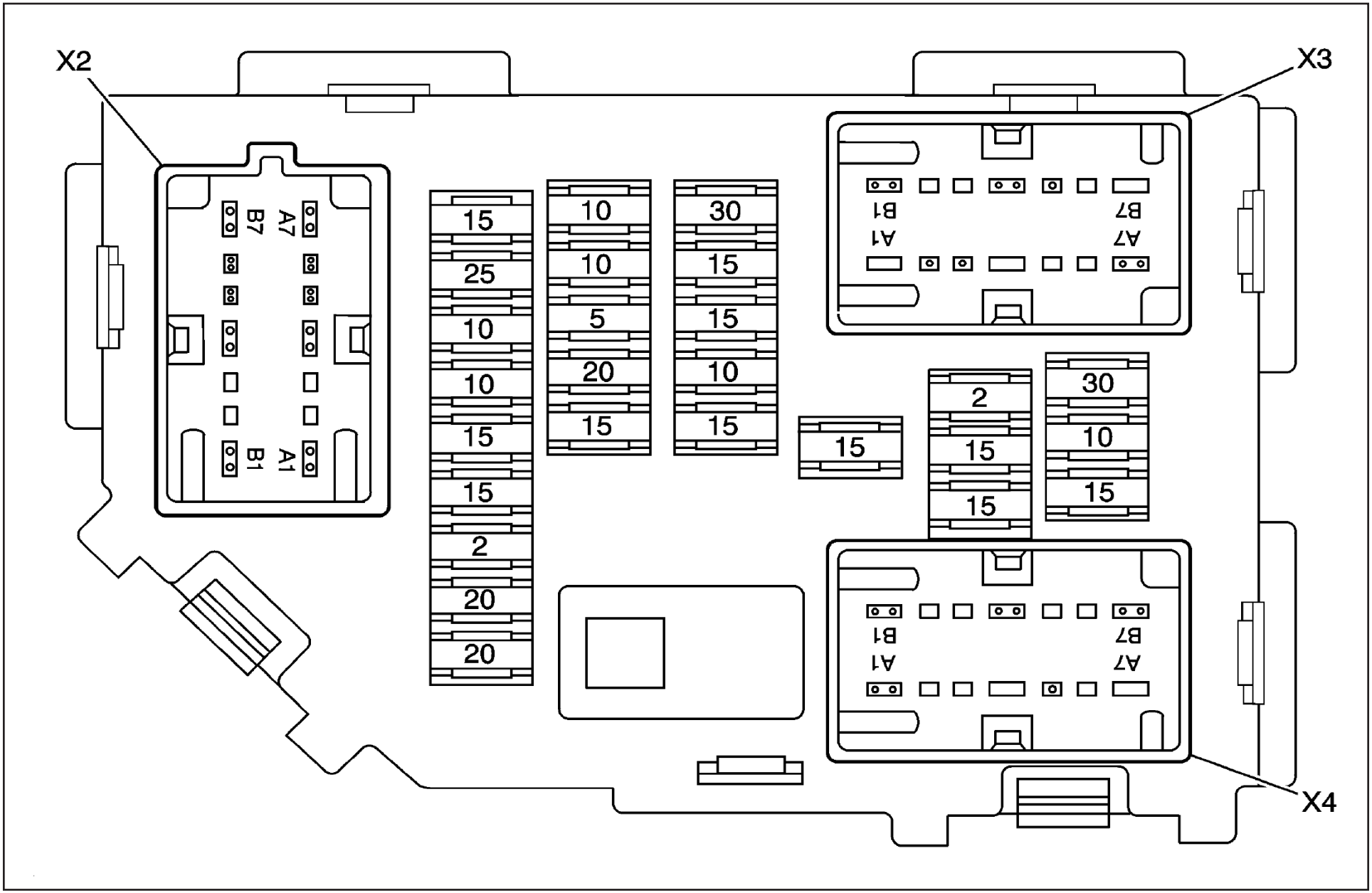


*(continued on next page)*

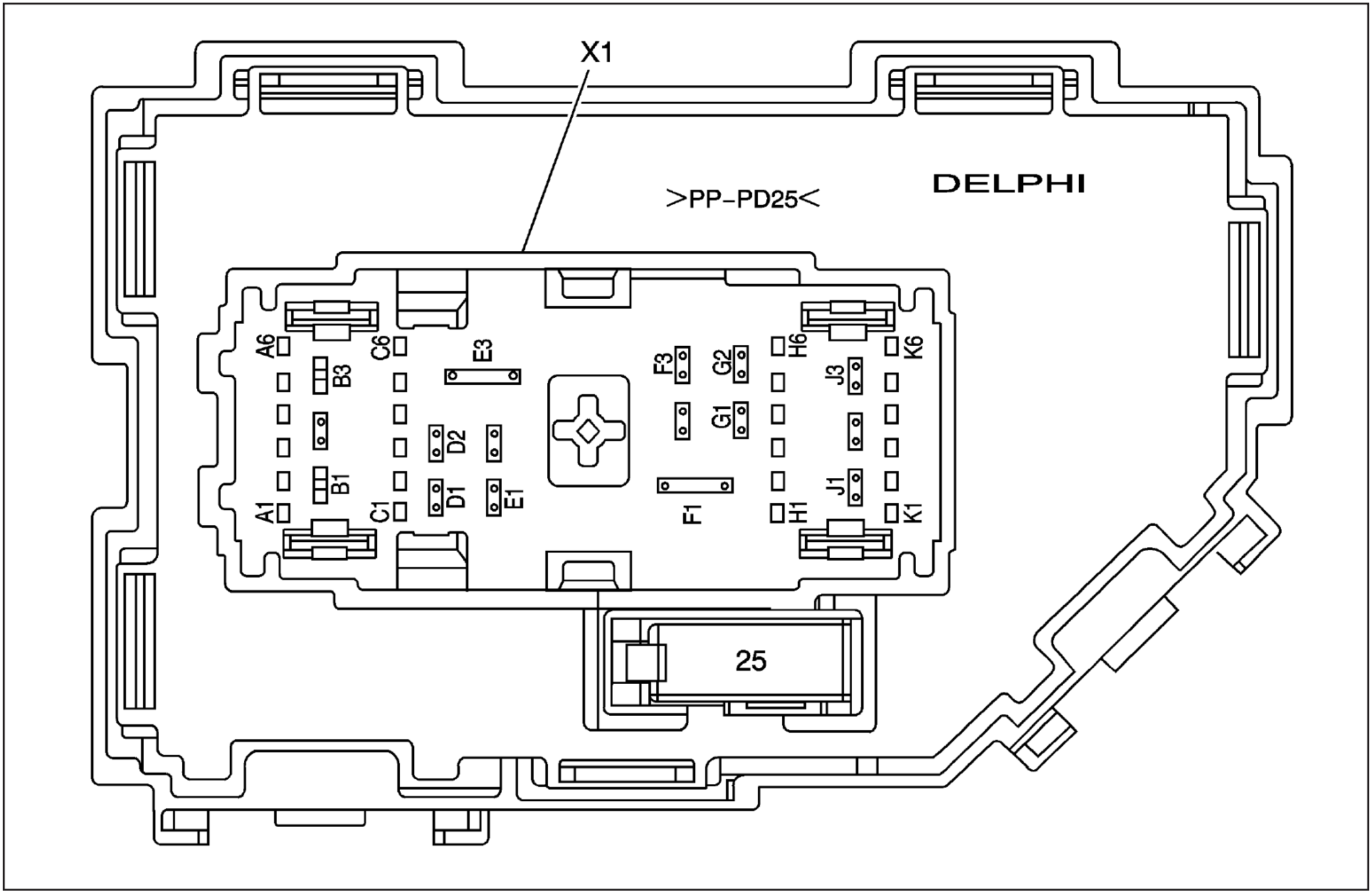
## Fuse Block - I/P Label (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 7 | DIM Fuse | 10A | Body Control Module (BCM) |
| 8 | RT STOP TRN Fuse | 15A | Body Control Module (BCM) |
| 9 | PDM Fuse | 15A | Garage Door Opener (GDO) (UG1), Door Lock/Window Switch - Passenger (YE9 or Y91), Roof Beacon Switch (5X7, 5Y0 or TRW) |
| 10 | UNLCK2 Fuse | 15A | Door Latch - Passenger (AU3 except AN3/DL3) |
| 11 | LCK2 Fuse | 15A | Door Latch - Passenger (AU3 except AN3 or DL3), Door Latch - Driver (AU3 except AN3 or DL3) |
| 12 | STOP LAMPS Fuse | 15A | Body Control Module (BCM) |
| 13 | REAR HVAC Fuse | 30A | Not Used |
| 14 | PWR MIR Fuse | 2A | Outside Rearview Mirror Switch (DL8 or DPN with YE9 and without AN3) |
| 15 | BCM Fuse | 10A | Body Control Module (BCM) |
| 16 | AUX PWR Fuse | 20A | Accessory Power Outlet - Center Console (D07 with UQA), Accessory power Outlet - Center Console Compartment (D07 with UQA), Accessory Power Outlet - I/P 2 |
| 17 | IS LPS Fuse | 10A | Body Control Module (BCM) |
| 18 | UNLCK1 Fuse | 15A | Door Latch - Left Rear (Crew Cab), Door Latch - Right Rear (Crew Cab) |
| 19 | RSE Fuse | 5A | Video Display (U42) |
| 20 | OBS DET Fuse | 10A | Rear Object Sensor Control Module (UD7) |
| 21 | LCK 1 Fuse | 15A | Door Latch - Left Rear (Crew Cab), Door Latch - Right Rear (Crew Cab) |
| 22 | INFO Fuse | 10A | Vehicle Communciation Interface Module (VCIM) (UE1) |
| 23 | REAR WPR Fuse | 25A | Not Used |
| 24 | COOLED SEATS Fuse | 30A | Seat Climate Control Module (KB6) |
| 25 | DSM Fuse | 10A | Memory Seat Module (AN3), Remote Control Door Lock Receiver (RCDLR) (AP3 or AP8) |
| 26 | DRV UNLCK Fuse | 15A | Door Latch - Driver (AU3 except AN3 or DL3) |
| -- | LT DR Circuit Breaker | 25A | Door Lock Window Switch - Driver (AN3 or DL3), Window Switch - Driver (A31 except AN3 or DL3), Window Switch - Left Rear (A31) |
| Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block. | | | |
| -- | Lock PCB Relay (AU3 except AN3/ DL3) | -- | Door Latch - Driver, Door Latch - Passenger, Door Latch - Left Rear (Crew Cab), Door Latch - Right Rear (Crew Cab) |
| -- | Lock/Unlock PCB Relay (Crew Cab with AN3) | -- | Door Latch - Left Rear, Door Latch - Right Rear |
| -- | Unlock PCB Relay (AU3 except AN3/ DL3) | -- | Door Latch - Driver, Door Latch - Passenger, Door Latch - Left Rear (Crew Cab), Door Latch - Right Rear (Crew Cab) |

## Fuse Block - I/P Top View

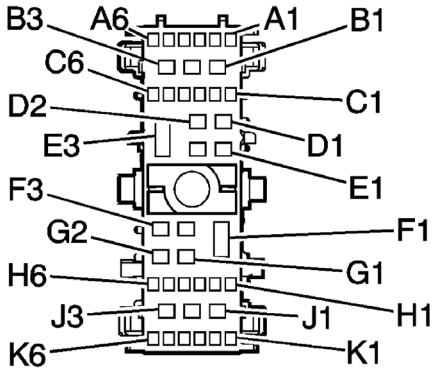


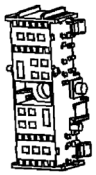
## *Fuse Block - I/P Bottom View*



# Fuse Block - I/P X1

**Connector Part Information**



Harness:
Instrument Panel

OEM: 13552254

Service:19178190

Description: 40-Way F GT 150 280 Metri-Pack 800 (BK)

**Terminal Part Information**

Pins: E3, F1

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Release Tool/Test Probe: 12150860/J-35616-44 (YE)

Pins: E1

Terminal/Tray: 15304713/19

Core/Insulation Crimp: F/D

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: A1, A2,

Terminal/Tray: 12191812/19

Core/Insulation Crimp: C/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: A5, A6, C1, C2, C3, C4, H5, H6, K1, K2

Terminal/Tray: 12191812/19

Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: B2, F3, J3

Terminal/Tray: 15304711/8

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: D1, D2, F2, G1, G2, J1, J2

Terminal/Tray: 15304711/8

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | 0.8 TN | 201 | Left Front Speaker Output (+) |
| A2 | 0.8 GY | 118 | Left Front Speaker Output (-) |
| A3-A4 | -- | -- | Not Used |
| A5 | 0.35 GY | 1690 | Automatic Day/Night Mirror Signal (HP2 or DL3 with DD8 or DRC) |
| A6 | 0.35 PK | 1691 | Low Reference (HP2 or DL3 with DD8 or DRC) |
| B1 | -- | -- | Not Used |
| B2 | 0.5 RD/WH | 2540 | Battery Positive Voltage |
| B3 | -- | -- | Not Used |
| C1 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (HP2 or AU3 without AN3) |

*(continued on next page)*

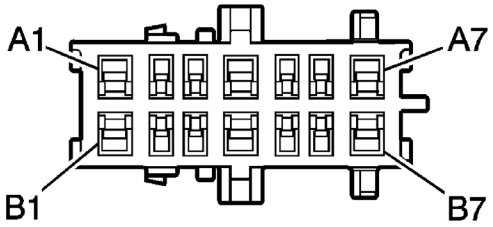
## Fuse Block - I/P X1 (cont'd)

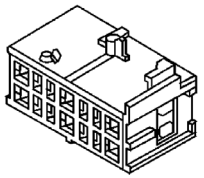
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| C2 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data (HP2, YE9 or, Y91 with AN3 or DL3) |
| C3 | 0.5 L-BU/WH | 1314 | Left Front Turn Signal Lamp Supply Voltage (DL3, DPN or HP2) |
| C4 | 0.5 L-BU/WH | 1314 | Left Front Turn Signal Lamp Supply Voltage (DL3, DPN or HP2) |
| C5-C6 | -- | -- | Not Used |
| D1 | 0.8 RD/WH | 3040 | Battery Positive Voltage |
| | 0.5 RD/WH | 3040 | Battery Positive Voltage (5X7, 5Y0 or TRW without YE9) |
| D2 | 0.8 RD/WH | 2940 | Battery Positive Voltage |
| E1 | 3 BK | 1850 | Ground |
| E2 | 0.8 RD/WH | 240 | Battery Positive Voltage (YE9, Y91 or HP2) |
| | 0.5 RD/WH | 240 | Battery Positive Voltage (YE9, Y91 or HP2) |
| E3 | 5 RD/BK | 842 | Battery Positive Voltage (except MEX) |
| | 5 RD/BK | 42 | Battery Positive Voltage (MEX) |
| F1 | 5 RD/BK | 42 | Battery Positive Voltage (except MEX) |
| | 5 RD/BK | 842 | Battery Positive Voltage (MEX) |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| F2 | 0.8 TN | 294 | Door Lock Actuator Unlock Control (HP2 or AU3 without AN3 or DL3) |
| F3 | 0.5 RD/WH | 3840 | Battery Positive Voltage |
| G1 | 0.8 GY | 295 | Door Lock Actuator Lock Control (HP2 or AU3 without AN3 or DL3) |
| G2 | 0.8 RD/WH | 1040 | Battery Positive Voltage |
| | 0.8 RD/WH | 1040 | Battery Positive Voltage (except MEX) |
| H1-H4 | -- | -- | Not Used |
| H5 | 0.5 RD/WH | 1540 | Battery Positive Voltage (U42 or HP2) |
| H6 | 0.5 RD/WH | 1540 | Battery Positive Voltage (UE1 with Y91) |
| | 0.5 RD/WH | 3240 | Battery Positive Voltage (except Y91) |
| J1 | 0.8 RD/WH | 2740 | Battery Positive Voltage |
| J2 | 0.8 RD/WH | 2240 | Battery Positive Voltage |
| J3 | 0.5 RD/WH | 2140 | Battery Positive Voltage |
| K1 | 0.35 BN | 6136 | Supply Voltage (except MEX) |
| K2 | 0.35 YE | 6817 | LED Backlight Dimming Control (except MEX) |
| K3-K6 | -- | -- | Not Used |

# Fuse Block - I/P X2 (except MEX)

**Connector Part Information**



Harness: Body

OEM: 15467621

Service: 19115663

Description: 14-Way F GT 150/280 Series (GY)

**Terminal Part Information**

Pins: A7, B1

Terminal/Tray: 15304713/19

Core/Insulation Crimp: 4/4

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: A1, B7

Terminal/Tray: 15304711/8

Core/Insulation Crimp: Pins A1, B7 - 2/A

Core/Insulation Crimp: Pins B7 - E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: A2, A3, A5, B5,

Terminal/Tray: 12191812/19

Core/Insulation Crimp: Pins A2, B5 - E/C

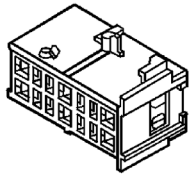
Core/Insulation Crimp: Pins A3, A5 - C/A

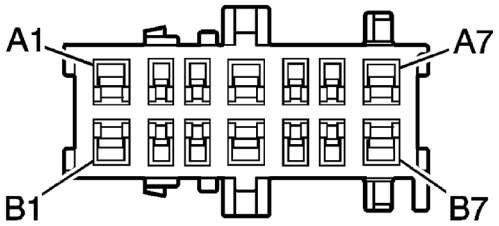
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | 0.8 RD/WH | 6040 | Battery Positive Voltage (AZ3, Crew Cab or Extended Cab with D07, with UQ3 or HP2) |
| A2 | 0.35 L-BU | 5921 | Driver Door Unlock Relay Control (YE9 or HP2 without AN3 or DL3) |
| A3 | 0.35 L-BU | 195 | Door Lock Control (AU3 without YE9, AN3 or DL3) |
| | 0.8 GY | 295 | Door Lock Actuator Lock Control (AU3 with YE9 and without AN3 or DL3, or HP2 without DL3) |
| A4 | -- | -- | Not Used |
| A5 | 0.8 TN | 694 | Driver Door Lock Actuator Unlock Control (AU3 with YE9 and without AN3 or DL3, or HP2 without DL3) |
| A6 | -- | -- | Not Used |
| A7 | 2 RD/WH | 4740 | Battery Positive Voltage (KB6) |
| B1 | 3 RD/WH | 1240 | Battery Positive Voltage (Crew Cab with A31 or HP2, or Extended Cab with ABV) |
| B2-B4 | -- | -- | Not Used |
| B5 | 0.35 RD/WH | 840 | Battery Positive Voltage (UD7) |
| B6 | -- | -- | Not Used |
| B7 | 0.5 RD/WH | 1140 | Battery Positive Voltage (AN3) |
| | 0.8 RD/WH | 1140 | Battery Positive Voltage (AP3 or AP8) |

# Fuse Block - I/P X3

**Connector Part Information**






Harness: Body

OEM: 15467620

Service: 19115662

Description: 14-Way F GT 150/280 Series (BK)

**Terminal Part Information**

Pins: A2, A3, A5, A6, B5, B6

Terminal/Tray: 12191812/19

Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: B1, B4

Terminal/Tray: 15304711/8

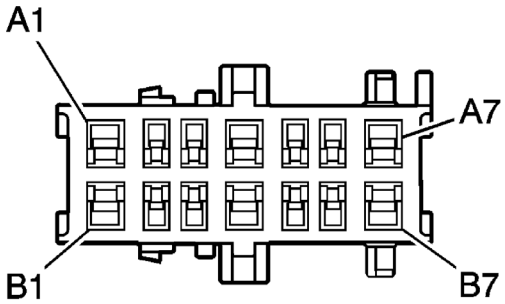
Core/Insulation Crimp: 2/A

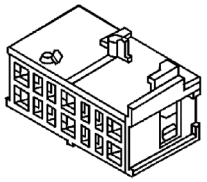
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | -- | -- | Not Used |
| A2 | 0.35 L-BU | 195 | Door Lock Control (YE9 or HP2) |
| | 0.35 L-BU | 5921 | Driver Unlock Relay Control (except YE9, MEX, HP2 or A52) |
| A3 | 0.35 WH | 194 | Unlock Relay Control (AU3, AN3 or HP2) |
| A4 | -- | -- | Not Used |
| A5 | 0.35 OG/BK | 781 | Driver Door Lock Switch Unlock Signal (except YE9, MEX, HP2 or A52) |
| A6 | 0.35 PK/BK | 780 | Driver Door Lock Switch Lock Signal (except YE9, MEX, HP2 or A52) |
| A7 | -- | -- | Not Used |
| B1 | 0.8 TN | 294 | Door Lock Actuator Unlock Control (Crew Cab with AU3 or HP2) |
| | 0.8 TN | 294 | Door Lock Actuator Unlock Control (Crew Cab with AU3 or HP2) |
| B2-B3 | -- | -- | Not Used |
| B4 | 0.8 GY | 295 | Door Lock Actuator Lock Control (Crew Cab with AU3 or HP2) |
| | 0.8 GY | 295 | Door Lock Actuator Lock Control (Crew Cab with AU3 or HP2) |
| B5 | 0.35 TN | 126 | Left Front Door Open Switch Signal (MEX or A52) |
| B6 | 0.35 GY/BK | 745 | Left Front Door Ajar Switch Signal (except AN3 or DL3) |
| B7 | -- | -- | Not Used |

# Fuse Block - I/P X4

**Connector Part Information**



Harness:
Left Front Door

OEM: 15467622

Service: 19115664

Description: 14-Way F GT 150/280 Series (L-GY)

**Terminal Part Information**

Pins: A1, B1

Terminal/Tray: 15304713/19

Core/Insulation Crimp: Pins A1,B1 - 4/4

Core/Insulation Crimp: Pins B1 - F/D

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B5, B6 (UQ3 or UQ5)

Pins: A2, A2, A3, A5, B2, B3

Terminal/Tray: 12191812/19

Core/Insulation Crimp: - E/C

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: B5, B6 (UQ4)

Terminal/Tray: 12191812/19

Core/Insulation Crimp: - C/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: A4, A7, B1, B4

Terminal/Tray: 15304711/8

Core/Insulation Crimp: Pins A4, A7, B1, B7 - E/A

Core/Insulation Crimp: Pins A7, B4, - 2/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

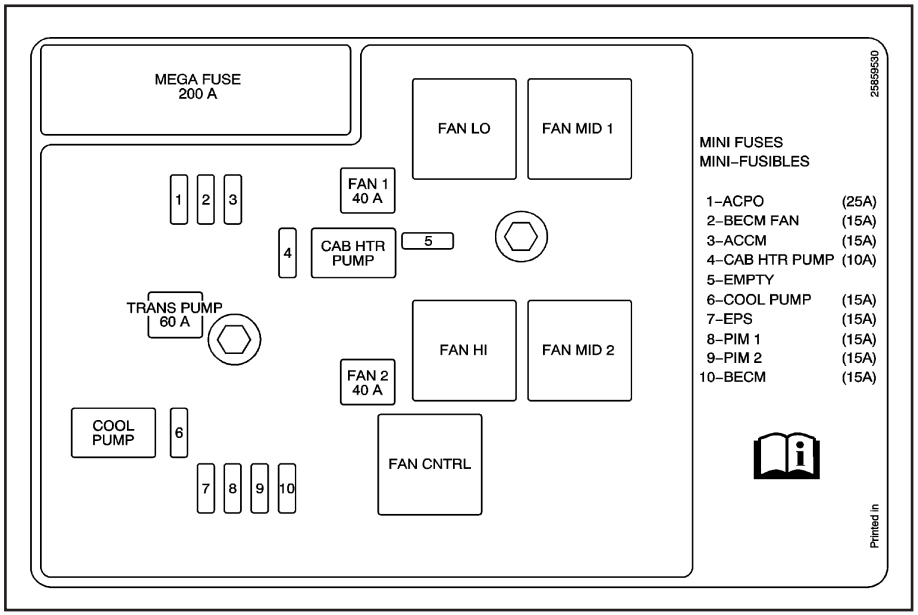
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | 2 RD/WH | 1240 | Battery Positive Voltage (A31) |
| A2 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data (YE9 or Y91 with AN3 or DL3) |
| | 0.35 OG/BK | 781 | Driver Door Lock Switch Unlock Signal (AU3 without YE9) |
| A3 | 0.35 GY/BK | 745 | Left Front Door Ajar Switch Signal (except AN3 or DL3) |
| A4 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (A31 without AN3) |
| | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (DL8, DPN or YE9 without AN3) |
| | 0.35 PK/BK | 780 | Driver Door Lock Switch Lock Signal (AU3 without YE9) |
| A5 | 0.35 PK | 1691 | Low Reference (DL3 with DD8 or DRC) |
| A6 | -- | -- | Not Used |

*(continued on next page)*

## Fuse Block - I/P X4 (cont'd)

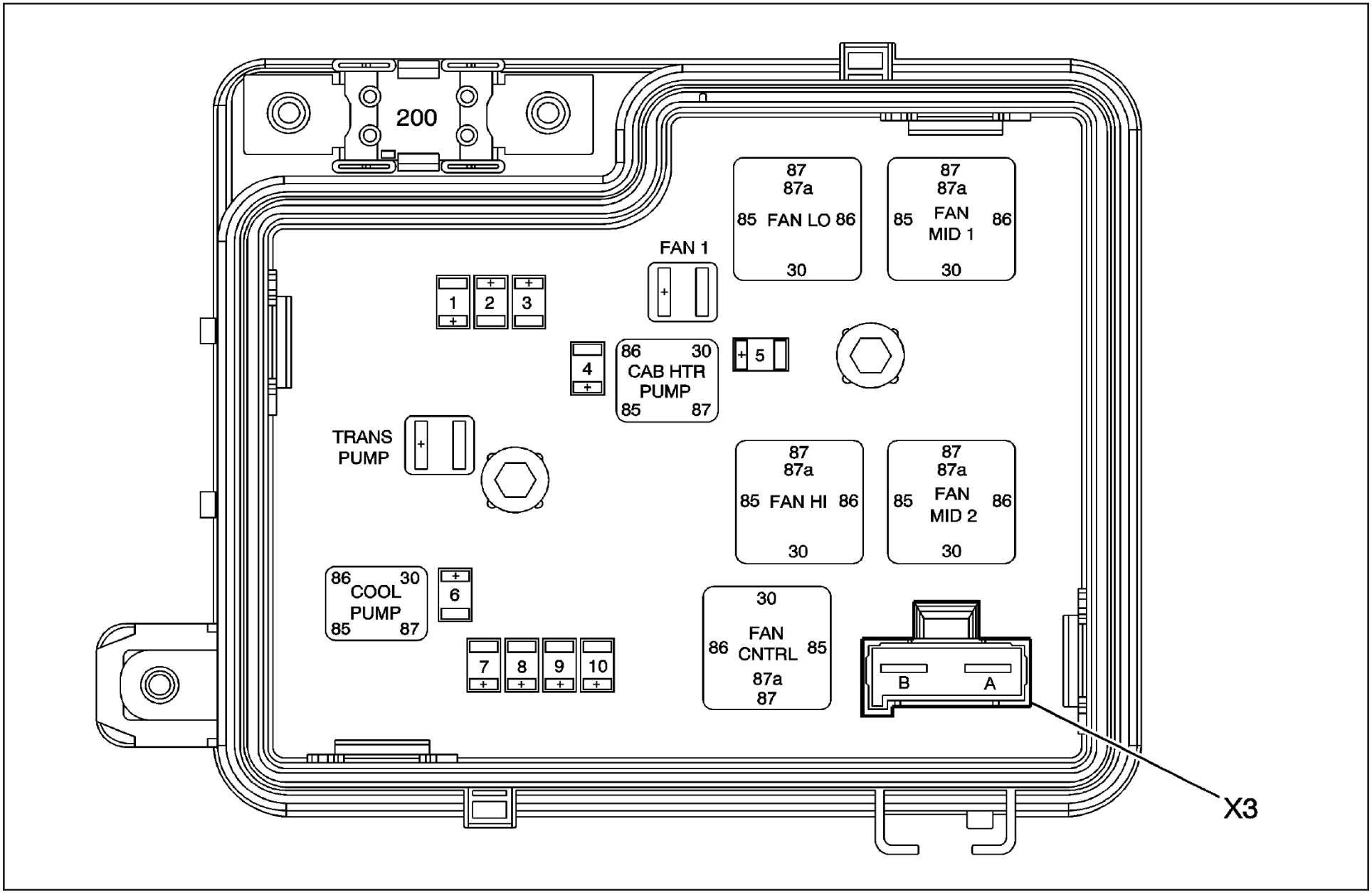
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A7 | 1 GY | 295 | Door Lock Actuator Lock Control (AU3 without YE9, AN3 or DL3) |
| | 0.5 RD/WH | 3540 | Battery Positive Voltage (DL8 or DPN without AN3) |
| B1 | 2 BK | 1850 | Ground |
| | 0.35 BK | 1850 | Ground (AU3 without A31) |
| B2 | 0.5 L-BU/WH | 1314 | Left Front Turn Signal Lamp Supply Voltage (DL3 or DPN) |
| B3 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (AU3 without AN3) |
| B4 | 0.8 RD/WH | 140 | Battery Positive Voltage (AN3) |
| | 1 TN | 694 | Driver Door Lock Actuator Unlock Control (AU3 without YE9, AN3 or DL3) |
| B5 | 0.8 GY | 118 | Left Front Speaker Output (-) (UQA) |
| | 0.5 GY | 118 | Left Front Speaker Output (-) (UQ3 or UQ5) |
| B6 | 0.8 TN | 201 | Left Front Speaker Output (+) (UQA) |
| | 0.5 TN | 201 | Left Front Speaker Output (+) (UQ3 or UQ5) |
| B7 | 0.35 GY | 1690 | Automatic Day/Night Mirror Signal (DL3 with DD8 or DRC) |

# Fuse Block - Auxiliary (HP2) Label

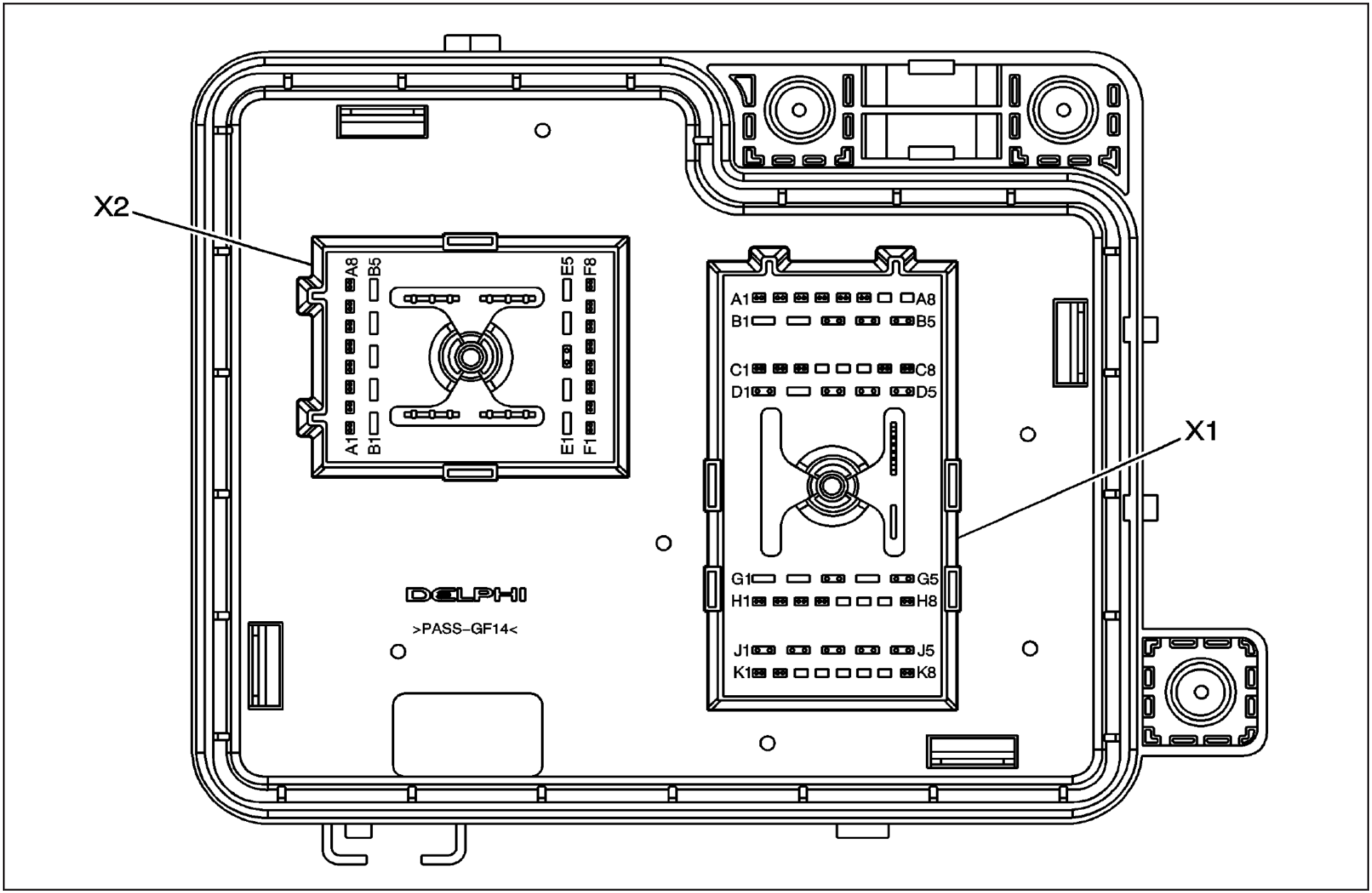



| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | ACPO Fuse | 25A | Not Used |
| 2 | BECM FAN Fuse | 15A | Generator Battery Vent Fan Relay |
| 3 | ACCM Fuse | 15A | A/C Compressor |
| 4 | CAB HTR PUMP Fuse | 10A | Heater Coolant Pump |
| 5 | EMPTY | -- | Not Used |
| 6 | COOL PUMP Fuse | 15A | Generator Control Module Coolant Pump - Left, Generator Control Module Coolant Pump - Right |
| 7 | EPS Fuse | 15A | Electronic Power Steering Motor Control Module |
| 8 | PIM 1 Fuse | 15A | Drive Motor Generator Power Inverter Module |
| 9 | PIM 2 Fuse | 15A | Drive Motor Generator Power Inverter Module |
| 10 | BECM Fuse | 15A | Drive Motor Generator Battery Control Module, Serial Data Gateway (SDG) Module |
| -- | FAN 1Fuse | 40A | FAN LO Relay, FAN MID 1 Relay |
| -- | FAN 2 Fuse | 40A | FAN HI Relay, FAN MID 2 Relay |
| -- | TRANS PUMP Fuse | 60A | Auxiliary Transmission Pump Control Module |
| -- | CAB HTR PUMP Relay | -- | CAB HTR PUMP Fuse, Heater Coolant Pump |
| -- | COOL PUMP Relay | -- | COOL PUMP Fuse, Generator Control Module Coolant Pump - Left, Generator Control Module Coolant Pump - Right |
| -- | FAN LO Relay | -- | Cooling Fan - Left |
| -- | FAN MID 1 Relay | -- | Engine Cooling Fan Resistor - Left |
| -- | FAN MID 2 Relay | -- | Cooling Fan - Right |
| -- | FAN HI Relay | -- | Cooling Fan - Right |
| -- | FAN CNTRL Relay | -- | Cooling Fan - Left |

## Fuse Block - Auxiliary (HP2), Top View

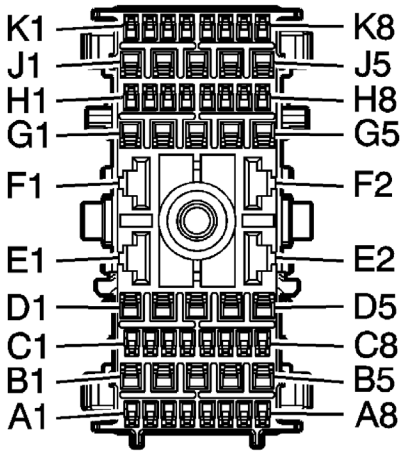


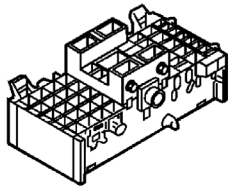
## Fuse Block - Auxiliary (HP2), Bottom View



# Fuse Block - Auxiliary X1 (HP2)

**Connector Part Information**



Harness: Engine

OEM: 15477822

Service:19115189

Description: 56-Way F GT 150 280 Metri-Pack 800 Series (BK)

**Terminal Part Information**

Pins: E2

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Release Tool/Test Probe: 12150860/J-35616-44 (YE)

Pins: A1-A3, C1-C3, H2-H4, K1, K2

Terminal/Tray: 12191812/19

Core/Insulation Crimp: Pins A1-A3, C2, C3, H2-H4, K1, K2 - E/C

Core/Insulation Crimp: Pins C1 - C/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: B3-B5, D1, J1-J4

Terminal/Tray: 15304711/8

Core/Insulation Crimp: Pins B3-B5, D1, J1-J3 - 2/A

Core/Insulation Crimp: Pins J4 - E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | 0.35 D-BU | 473 | High Speed Cooling Fan Relay Control |
| A2 | 0.35 PU | 5128 | Auxiliary Cooling Fan Relay Control |
| A3 | 0.5 PK | 1839 | Ignition Voltage |
| A4-A8 | -- | -- | Not Used |
| B1-B2 | -- | -- | Not Used |
| B3 | 0.8 RD/WH | 3340 | Battery Positive Voltage |
| B4 | 0.8 RD/WH | 4640 | Battery Positive Voltage |
| B5 | 1 RD/WH | 4140 | Battery Positive Voltage |
| C1 | 0.8 PK | 2014 | Coolant Pump Relay Control |
| C2 | 0.5 TN | 955 | Low Reference |
| C3 | 0.5 YE | 954 | 5-Volt Reference |
| C4-C8 | -- | -- | Not Used |
| D1 | 0.8 OG/WH | 7585 | Motor Feed |
| D2-D5 | -- | -- | Not Used |
| E1 | -- | -- | Not Used |
| E2 | 5 RD/WH | 4040 | Battery Positive Voltage |
| F1-F2 | -- | -- | Not Used |
| G1-G4 | -- | -- | Not Used |
| G5 | 0.5 D-GN | 942 | Generator Control Module Coolant Pump Feed |

*(continued on next page)*

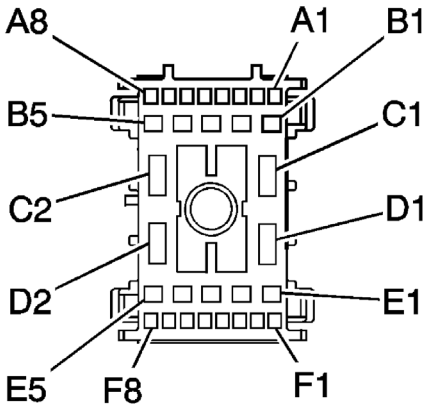
## Fuse Block - Auxiliary X1 (HP2) (cont'd)

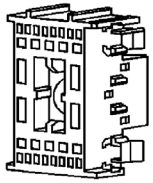
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| H1-H2 | -- | -- | Not Used |
| H3 | 0.35 D-GN | 335 | Low Speed Cooling Fan Relay Control |
| H4 | 0.5 PU | 5531 | Hood Switch Signal |
| H5-H7 | -- | -- | Not Used |
| H8 | 0.5 D-BU | 941 | Generator Control Module Coolant Pump Relay Control |
| J1 | 0.8 RD/WH | 4240 | Battery Positive Voltage |
| | 0.8 RD/WH | 4240 | Battery Positive Voltage |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| J2 | 0.8 RD/WH | 984 | 5-Volt Reference |
| J3 | 0.8 RD/WH | 983 | Transmission Fluid Pump Control |
| J4 | 0.5 RD/WH | 40 | Battery Positive Voltage |
| J5 | -- | -- | Not Used |
| K1 | -- | -- | Not Used |
| K2 | 0.5 PK/BK | 109 | Hood Ajar Switch Signal |
| K3-K8 | -- | -- | Not Used |

# Fuse Block - Auxiliary X2 (HP2)

**Connector Part Information**



Harness: Forward Lamp

OEM: 13567518

Service: 19180280

Description: 30-Way F GT 150 280 Metri-Pack 800 Series (BK)

**Terminal Part Information**

Pins: C1, C2, D1, D2

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Release Tool/Test Probe: 12150860/J-35616-44 (YE)

Pins: A2-A8, E3, F1-F5

Terminal/Tray: 15496302/5

Core/Insulation Crimp: Pins A2-A8, E3, F2, F4, F5 - E/A

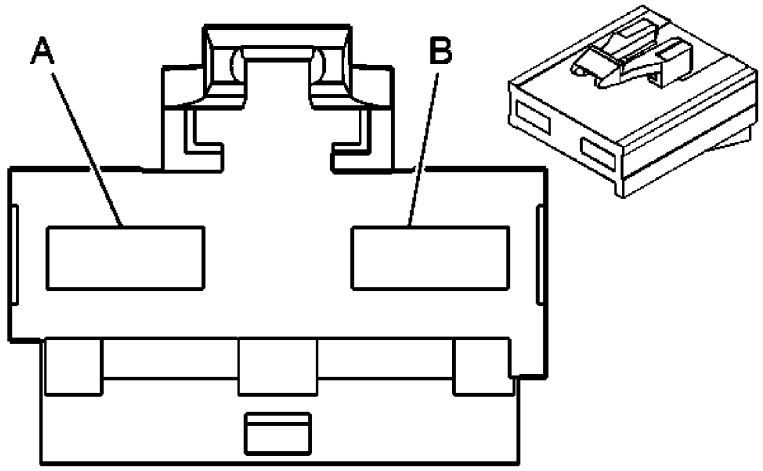
Core/Insulation Crimp: Pins F1-2/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | -- | -- | Not Used |
| A2 | 0.5 PU | 5531 | Hood Switch Signal |
| A3 | 0.5 PK/BK | 109 | Hood Ajar Switch Signal |
| A4 | -- | -- | Not Used |
| A5 | 0.5 PU | 5531 | Hood Switch Signal |
| A6 | 0.5 PU | 5531 | Hood Switch Signal |
| A7 | 0.5 PK/BK | 109 | Hood Ajar Switch Signal |
| A8 | 0.5 PK/BK | 109 | Hood Ajar Switch Signal |
| B1-B5 | -- | -- | Not Used |
| C1 | 5 GY | 532 | Cooling Fan Motor Supply Voltage |
| C2 | 5 L-BU | 409 | Cooling Fan Motor Supply Voltage |
| D1 | 5 GY | 532 | Cooling Fan Motor Supply Voltage |
| D2 | 5 L-BU | 409 | Cooling Fan Motor Supply Voltage |
| E1-E5 | -- | -- | Not Used |
| F1 | 0.8 BK | 250 | Ground |
| F2-F3 | -- | -- | Not Used |
| F4 | 0.5 YE | 954 | Electronics Coolant Temperature Sensor 5-volt Reference |
| F5 | 0.5 YE | 955 | Electronics Coolant Temperature Sensor Low Reference |
| F6-F8 | -- | -- | Not Used |

# Fuse Blocks - Auxiliary X3 (HP2), Auxiliary X4 (HP2), Auxiliary Fuse Holder (HP2)

**Fuse Block - Auxiliary X3 (HP2)**
**Connector Part Information**




Harness: Forward Lamp

OEM: 12193693

Service: 12193693

Description: 2-Way F MAXI FUSE (BK)

**Terminal Part Information**

Terminal/Tray: 12110127/19

Core/Insulation Crimp: F/G

Release Tool/Test Probe: 12150860/J-35616-44 (YE)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 5 BK | 150 | Ground |
| B | 5 YE | 5358 | Auxiliary Cooling Fan Motor Supply Voltage |

**Fuse Block - Auxiliary X4 (HP2)**
**Terminal Part Information**

Harness: Battery Cable

Terminal: 12146714

Core/Insulation Crimp: N/A

Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| + | 13 RD/BK | 2 | Battery Positive Voltage |

**Fuse Block - Auxiliary, Fuse Holder (HP2)**
**Terminal Part Information**

Harness: Battery Cable

Terminal: 15326191

Core/Insulation Crimp: N/A

Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| + | 50 RD | 1 | Battery Positive Voltage |

**Fuse Block - Auxiliary, Fuse Holder (HP2)**
**Terminal Part Information**

Harness: Accessory DC Power Control Module Cable

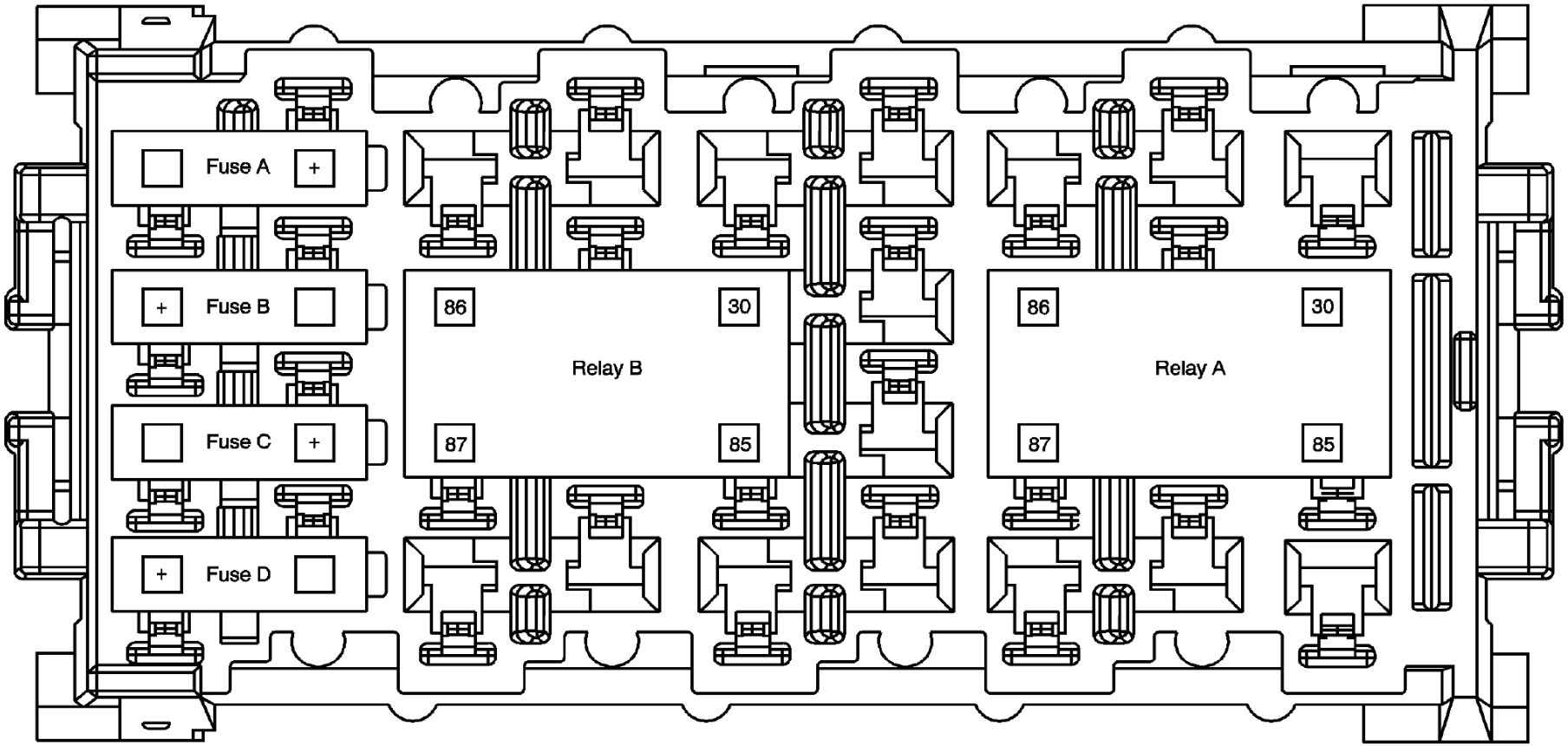
Terminal: 15326191

Core/Insulation Crimp: N/A

Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| + | 62 RD | 2 | Battery Positive Voltage |

## Fuse Block - Mobile Radio, Top View (9L4), Device Usage



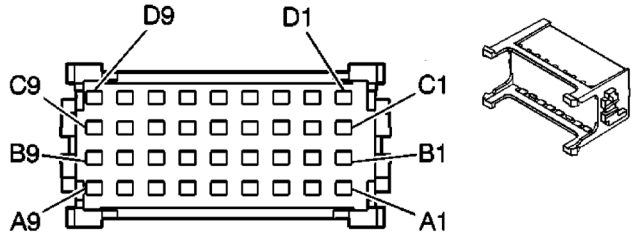

**Fuse Block - Mobile Radio, Device Usage (9L4)**

| Device | Rating | Description |
|---|---|---|
| Fuse A | 30A | Blunt Cut - Mobile Radio Provision |
| Fuse B | 30A | Blunt Cut - Mobile Radio Provision |
| Fuse C | 30A | Blunt Cut - Mobile Radio Provision |

| Device | Rating | Description |
|---|---|---|
| Fuse D | 30A | Blunt Cut - Mobile Radio Provision |
| Relay A | -- | Blunt Cut - Mobile Radio Provision |
| Relay B | -- | Blunt Cut - Mobile Radio Provision |

# Fuse Block - Mobile Radio (9L4)

**Connector Part Information**






Harness:
Fuse Block
Jumper

OEM: 12160504

Service: Service by Harness - See Part Catalog

Description: 36-Way F Metri-Pack 280 Series, Flexlock (BK)

**Terminal Part Information**

Pins: A8, A9, B1, B5, B8, C1, C3, C5, C7-C9, D8

Terminal/Tray: 12110652/4

Core/Insulation Crimp: See Terminal Repair Kit

Release Tool/Test Probe: See Terminal Repair Kit

Pins: B3

Terminal/Tray: 12110657/4

Core/Insulation Crimp: See Terminal Repair Kit

Release Tool/Test Probe: See Terminal Repair Kit

Pins: B7

Terminal/Tray: 12110652/4

Core/Insulation Crimp: F/D

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B9, D9

Terminal/Tray: 12110657/4

Core/Insulation Crimp: B/G

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1-A7 | -- | -- | Not Used |
| A8 | 3 BK | 50 | Ground |
| A9 | 3 BK | 450 | Ground |
| B1 | 3 L-BU | 6122 | Mobile Radio Relay Control |
| B2 | -- | -- | Not Used |
| B3 | 1 BK | 450 | Ground |
| | 1 BK | 450 | Ground |
| B4 | -- | -- | Not Used |
| B5 | 3 L-GN | 6123 | Relay B Output |
| B6 | -- | -- | Not Used |
| B7 | 1 BK | 450 | Ground |
| B8 | 3 RD/WH | 5440 | Battery Positive Voltage |
| B9 | 5 RD/BK | 102 | Battery Positive Voltage |
| C1 | 0.5 YE | 43 | Ignition Voltage Signal |
| C2 | -- | -- | Not Used |
| C3 | 3 RD/WH | 5440 | Battery Positive Voltage |
| C4 | -- | -- | Not Used |
| C5 | 3 L-BU | 6122 | Mobile Radio Relay Control |
| C6 | -- | -- | Not Used |
| C7 | 3 RD/WH | 5440 | Battery Positive Voltage |
| C8 | 3 BK | 50 | Ground |
| C9 | 3 BK | 450 | Ground |
| D1-D7 | -- | -- | Not Used |
| D8 | 3 RD/WH | 5440 | Battery Positive Voltage |
| D9 | 5 RD/BK | 102 | Battery Positive Voltage |

# Fuse Holder, Device Usage (Gas and Diesel)

**Fuse Holder , Device Usage (Gas)**

| Device | Rating | Description |
|---|---|---|
| Mega Fuse | 175A | Fuse Block - Underhood, Generator |
| Mega Fuse | 125A | Auxiliary Battery Relay (TP2) |
| Mega Fuse | 60A | Fuse Block - Mobile Radio (9L4) |

**Fuse Holder , Device Usage (Diesel)**

| Device | Rating | Description |
|---|---|---|
| Mega Fuse | 175A | Fuse Block - Underhood, Generator |
| Mega Fuse | 175A | Auxiliary Battery Relay (TP2), Generator - Auxiliary (K76/YF2), Intake Air Heater |
| Mega Fuse | 125A | Glow Plug Control Module |

# Fuse Holders: X1 (Gas except 9L4), X1 (Diesel or Gas with 9L4), X2 (Gas with TP2), X2 (Diesel or Gas except LU3), X2 (LU3), X2 (Gas except LU3)

**Fuse Holder X1 (Gas except 9L4)**
**Terminal Part Information**

Harness: Battery Positive
Terminal: 00010584
Core/Insulation Crimp: N/A
Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 32 RD | 1 | Battery Positive Voltage |

**Fuse Holder X2 (Diesel or Gas except LU3)**
**Terminal Part Information**

Harness: Battery Positive
Terminal: 00010375 (Gas except 9L4)
Terminal: 00010378 (Diesel/Gas with 9L4)
Core/Insulation Crimp: N/A
Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 19 RD | 2 | Battery Positive Voltage |

**Fuse Holder X1 (Diesel or Gas with 9L4)**
**Terminal Part Information**

Harness: Chassis
Terminal: 00010584
Core/Insulation Crimp: N/A
Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 32 RD | 1 | Battery Positive Voltage |

**Fuse Holder X2 (LU3)**
**Terminal Part Information**

Harness: Engine
Terminal: 13544833
Core/Insulation Crimp: N/A
Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 19 RD/BK | 2 | Battery Positive Voltage |

**Fuse Holder X2 (Gas with TP2)**
**Terminal Part Information**

Harness: Auxiliary Battery Positive
Terminal: 00010378
Core/Insulation Crimp: N/A
Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 19 RD/BK | 2 | Battery Positive Voltage |

**Fuse Holder X2 (Gas except LU3)**
**Terminal Part Information**

Harness: Generator Jumper
Terminal: 00010375
Core/Insulation Crimp: N/A
Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 19 RD/BK | 2 | Battery Positive Voltage |

# Fuse Holders: X2 (Diesel), X3 (9L4), X3 (Diesel), X4 (TP2), X4 (Diesel), X4 (Diesel with K76 or YF2)

**Fuse Holder X2 (Diesel)**
**Terminal Part Information**

Harness: Engine Chassis
Terminal: 12146745
Core/Insulation Crimp: N/A
Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 19 RD/BK | 2 | Battery Positive Voltage |

**Fuse Holder X4 (TP2)**
**Terminal Part Information**

Harness: Auxiliary Battery Positive
Terminal: 00012131
Core/Insulation Crimp: N/A
Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 13 RD/BK | 2 | Battery Positive Voltage |

**Fuse Holder X3 (9L4)**
**Terminal Part Information**

Harness: Battery Positive
Terminal: 12146363
Core/Insulation Crimp: N/A
Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 8 RD/BK | 102 | Battery Positive Voltage |

**Fuse Holder X4 (Diesel)**
**Terminal Part Information**

Harness: Engine Chassis
Terminal: 12146745
Core/Insulation Crimp: N/A
Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 19 RD | 2 | Battery Positive Voltage |

**Fuse Holder X3 (Diesel)**
**Terminal Part Information**

Harness: Engine
Terminal: 00012131
Core/Insulation Crimp: N/A
Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 19 RD | 2 | Battery Positive Voltage |

**Fuse Holder X4 (Diesel with K76 or YF2)**
**Terminal Part Information**

Terminal: 13544833
Core/Insulation Crimp: N/A
Description: Ring Terminal

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 19 RD/BK | 2 | Battery Positive Voltage |

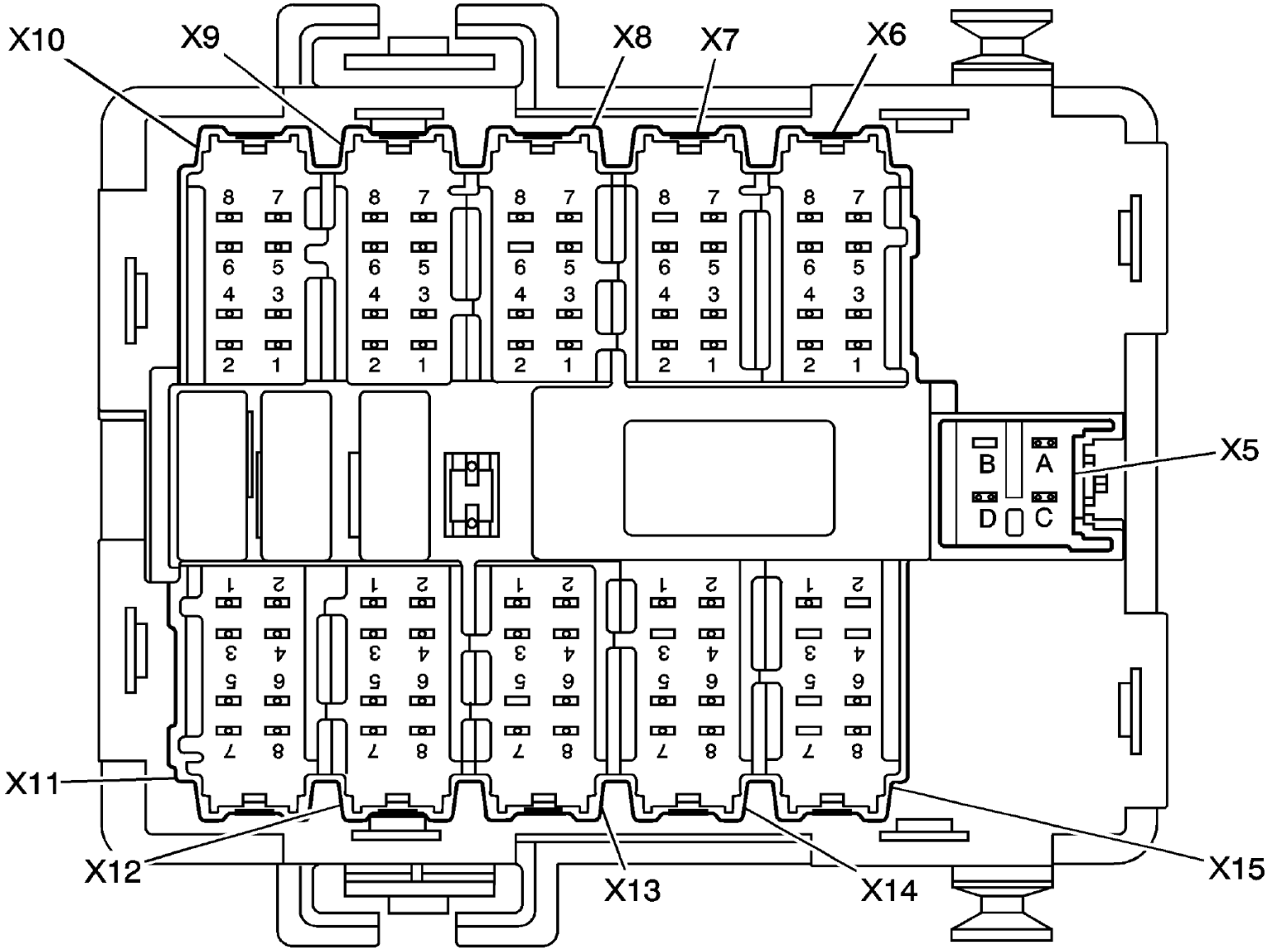
## Junction Block - Left I/P, Label

CIRCUIT BREAKERS

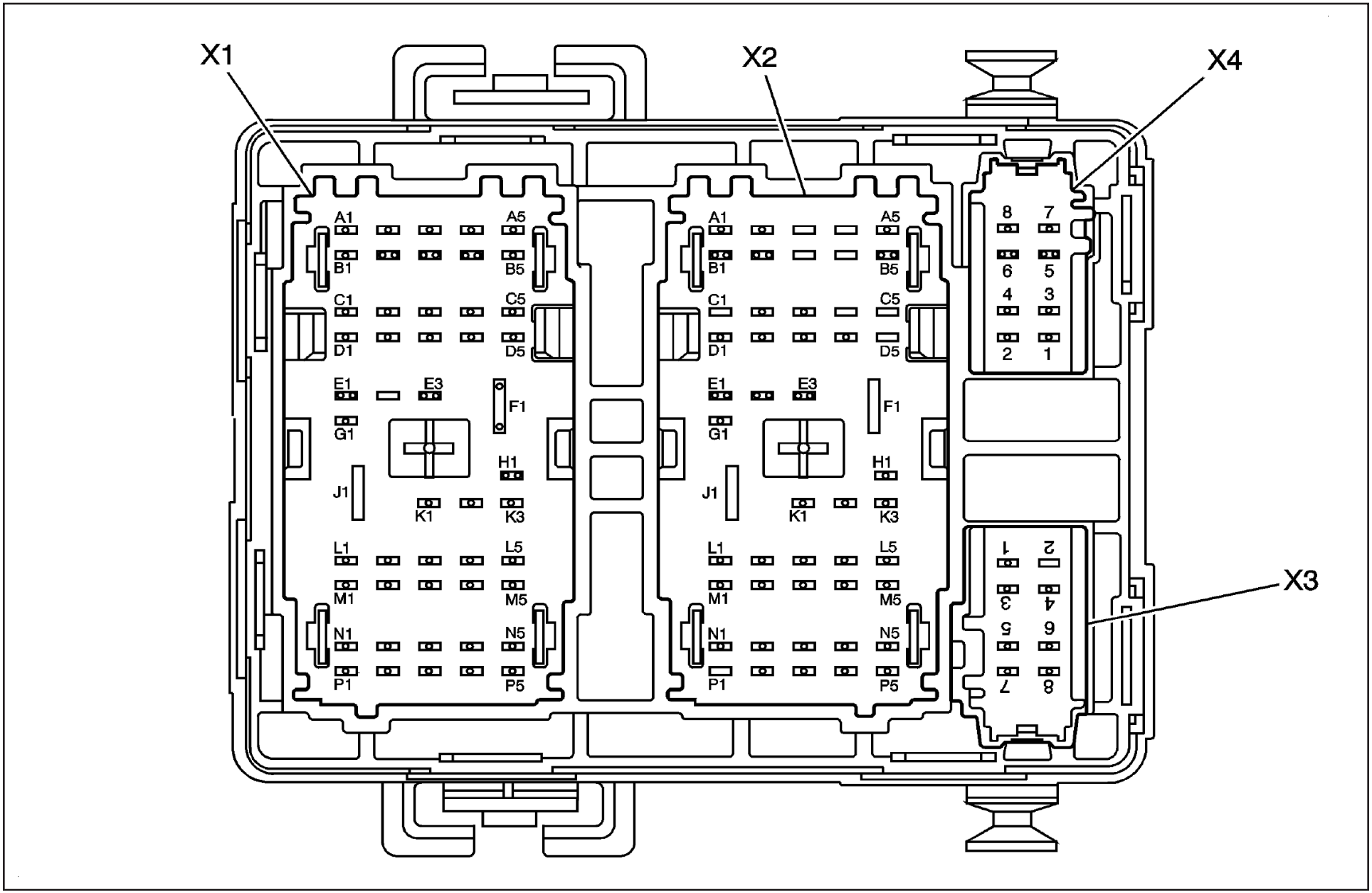
CB1 = RT DOORS (25A)
CB2 = PASS SEAT 1 (25A)
CB3 = DRIVER SEAT 2 (25A)
CB4 = PWR REAR WNDW (25A)

| Device | Rating | Description |
|---|---|---|
| DRIVER SEAT 2 Circuit Breaker | 25A | Memory Seat Module (AN3), Seat Adjuster Switch - Driver (AG1 except AN3) |
| PASS SEAT 1 Circuit Breaker | 25A | Seat Adjuster Switch - Passenger, Seat Lumbar Switch - Passenger (AN3) |
| PWR REAR WNDW Circuit Breaker | 25A | Not Used |
| RT DOORS Circuit Breaker | 25A | Passenger Door Module (PDM), Window Switch - RR |

## Junction Block - Left I/P, Top View



## Junction Block - Left I/P, Bottom View



# Junction Block - Left I/P X1 (except MEX)

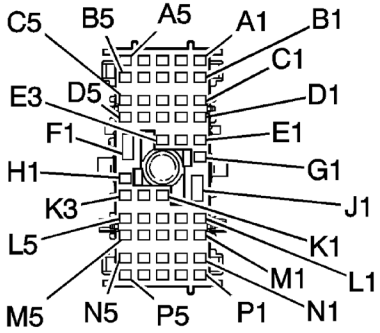
**Connector Part Information**

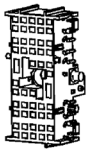
Harness:
Instrument Panel

OEM: 15467568

Service: 19115661

Description: 50-Way F
GT 280 Series (GY)



**Terminal Part Information**

Pins: F1
Terminal/Tray: 12110127/19
Core/Insulation Crimp: F/G
Release Tool/Test Probe: 12150860/J-35616-44 (YE)

Pins: D1, K2
Terminal/Tray: 15304713/19
Core/Insulation Crimp: 4/4
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: A1, A3, A4, B4, C1, C2, D3, E1, E3, H1, K1, L1-L4, M1-M5, N1-N3, N5, P1-P3, P5
Terminal/Tray: 15304711/8
Core/Insulation Crimp: E/A
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B3, E3, G1, K3
Terminal/Tray: 15304711/8
Core/Insulation Crimp: 2/A
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | 0.5 RD/WH | 4440 | Battery Positive Voltage |
| A2 | -- | -- | Not Used |
| A3 | 0.35 PK | 239 | Ignition 1 Voltage |
| | 0.35 PK | 239 | Ignition 1 Voltage (NQF or NQH) |
| A4 | 0.35 PK | 239 | Ignition 1 Voltage (HP2 or UVC) |
| | 0.8 PK | 239 | Ignition 1 Voltage (PTO or EXP) |
| A5 | 0.5 BK | 2550 | Ground (U42, UK6 or Y91) |
| B1-B2 | -- | -- | Not Used |
| B3 | 1 BK | 2550 | Ground |
| B4 | 0.5 GY | 157 | Courtesy Lamp Control |
| B5 | -- | -- | Not Used |
| C1 | 0.35 PK | 1639 | Ignition 1 Voltage (DL3 with DD8 or DRC) |
| C2 | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control |
| | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (HP2 or AU3 without AN3) |
| C3 | 0.5 BK | 2250 | Ground (U2K with Y91) |
| | 0.5 BK | 2250 | Ground (UE1 with Y91) |
| C4 | -- | -- | Not Used |
| C5 | 0.5 YE/BK | 5813 | Park Enable Supply Voltage (JF4 without AN3) |
| D1 | 2 RD/WH | 1340 | Battery Positive Voltage (A31 or HP2) |
| D2 | -- | -- | Not Used |
| D3 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (except MEX or 8S8) |
| | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control (HP2 or AU3 without AN3) |

*(continued on next page)*

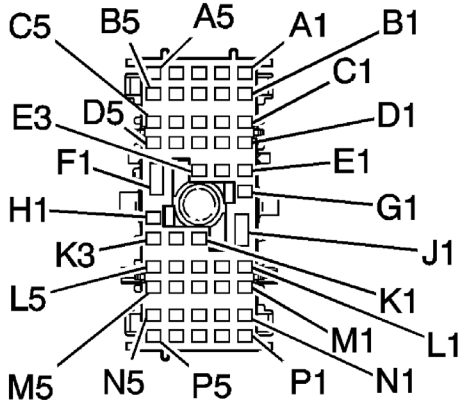
## Junction Block - Left I/P X1 (except MEX) (cont'd)

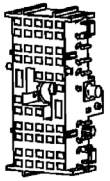
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| D4-D5 | -- | -- | Not Used |
| E1 | 0.5 BK/WH | 1851 | Ground (XA7) |
| E2 | -- | -- | Not Used |
| E3 | 0.8 BK/WH | 1851 | Ground |
| | 0.5 BK/WH | 1851 | Ground |
| F1 | 5 RD/BK | 642 | Battery Positive Voltage (YE9 or HP2) |
| G1 | -- | -- | Not Used |
| H1 | 0.5 BK/WH | 1851 | Ground |
| | 0.5 BK/WH | 1851 | Ground |
| J1 | -- | -- | Not Used |
| K1 | 0.5 BK/WH | 1851 | Ground |
| | 0.35 BK/WH | 1851 | Ground |
| K2 | 2 BK/WH | 1851 | Ground |
| K3 | 0.8 BK/WH | 1851 | Ground |
| | 0.8 BK/WH | 1851 | Ground (EXP or HP2) |
| L1 | 0.5 OG | 6815 | Inadvertent Power Control |
| L2 | 0.5 RD/WH | 240 | Battery Positive Voltage (YE9, Y91 or HP2) |
| | 0.5 RD/WH | 3040 | Battery Positive Voltage (5X7, 5Y0, TRW or 8S8 without YE9) |
| L3 | 0.35 PU/WH | 6816 | Indicator Dimming Control |
| L4 | 0.35 WH/BK | 5515 | Inside Air Temperature Sensor Assembly Control (CJ2) |
| L5 | -- | -- | Not Used |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| M1 | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control |
| | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control (HP2 with NQH) |
| | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (NQF or NQH except HP2) |
| M2 | 0.35 PK | 1691 | Low Reference (HP2 or DL3 with DD8 or DRC) |
| M3 | 0.35 PU/WH | 6816 | Indicator Dimming Control |
| M4 | 0.35 D-GN | 734 | Inside Air Temperature Sensor Signal (CJ2) |
| M5 | 0.5 OG | 1054 | Stop Lamp Supply Voltage (except EXP) |
| | 0.5 OG | 1054 | Stop Lamp Supply Voltage (except EXP) |
| | 0.5 L-BN | 1320 | Stop Lamp Supply Voltage (EXP) |
| N1 | 0.35 D-GN | 6134 | Linear Interconnect Network Bus (YE9, Y91 or HP2) |
| N2 | -- | -- | Not Used |
| N3 | 0.35 PU/WH | 6816 | Indicator Dimming Control (PTO) |
| N4 | -- | -- | Not Used |
| N5 | 0.35 PK | 1139 | Ignition 1 Voltage |
| P1 | 0.35 D-BU | 38 | Backup Lamp Relay Control (UVC) |
| P2 | 0.35 GY | 1690 | Automatic Day/Night Mirror Signal (HP2 or DL3 with DD8 or DRC) |
| P3 | 0.35 PU/WH | 6816 | Indicator Dimming Control (NQF or NQH) |
| P4 | -- | -- | Not Used |
| P5 | 0.35 D-GN | 6101 | Low Reference (CJ2) |

# Junction Block - Left I/P X2 (except MEX)

**Connector Part Information**



Harness:
Instrument Panel

OEM: 15467567

Service: 19149284

Description: 50-Way F GT 280 Series (BK)

**Terminal Part Information**

Pins: A1, A2, B5, C1, C3, E1-E3, G1, H1, K2, K3, L3-L5, M3, M5, N1, N3-N5, P1, P3, P5

Terminal/Tray: 15304711/8

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: A5, D3

Terminal/Tray: 15304711/8

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: P4

Terminal/Tray: 15304713/19

Core/Insulation Crimp: F/D

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B1, D1

Terminal/Tray: 15304713/19

Core/Insulation Crimp: 4/4

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | 0.35 PK | 739 | Ignition 1 Voltage |
| A2 | 0.35 YE | 43 | Accessory Voltage |
| | 0.35 YE | 43 | Accessory Voltage (except YE9, HP2, or YE9 with AN3 or DL3) |
| A3-A4 | -- | -- | Not Used |
| A5 | 0.8 RD/WH | 1040 | Battery Positive Voltage (except Y91 or 853) |
| B1 | 3 RD/WH | 2340 | Battery Positive Voltage |
| B2-B4 | -- | -- | Not Used |
| B5 | 0.5 RD/WH | 3240 | Battery Positive Voltage (except Y91) |
| C1 | 0.5 YE/BK | 5813 | Park Enable Supply Voltage (YE9 or Y91) |
| C2 | 3 BK | 2550 | Ground (Y91) |
| C3 | 0.5 RD/WH | 340 | Battery Positive Voltage (except Y91 or 853) |
| C4-C5 | -- | -- | Not Used |

*(continued on next page)*

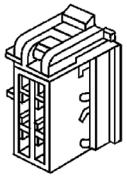
## Junction Block - Left I/P X2 (except MEX) (cont'd)

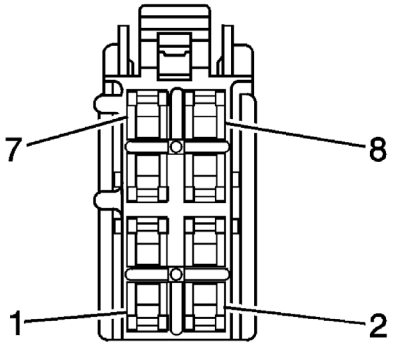
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| D1 | 2 BK | 1050 | Ground |
| D2 | -- | -- | Not Used |
| D3 | 0.8 RD/WH | 4540 | Battery Positive Voltage |
| | 0.8 RD/WH | 4540 | Battery Positive Voltage (PTO or EXP) |
| | 0.5 RD/WH | 4540 | Battery Positive Voltage (8S8) |
| D4-D5 | -- | -- | Not Used |
| E1 | 0.5 OG/BK | 5285 | Adjustable Pedals Relay Rearward Control (YE9 or Y91) |
| E2 | 0.5 RD/WH | 740 | Battery Positive Voltage (YE9 or Y91) |
| E3 | 0.35 YE | 6812 | Out of Park Signal (YE9 or Y91) |
| G1 | 0.5 PU | 5286 | Adjustable Pedals Relay Forward Control (YE9 or Y91) |
| H1 | 0.35 D-GN/WH | 817 | Vehicle Speed Signal |
| | 0.5 D-GN/WH | 817 | Vehicle Speed Signal (Y91) |
| J1 | -- | -- | Not Used |
| K1 | -- | -- | Not Used |
| K2 | 0.35 YE | 6817 | LED Backlight Dimming Control |
| K3 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data |
| L1-L2 | -- | -- | Not Used |
| L3 | 0.35 YE | 6817 | LED Backlight Dimming Control (except 853) |
| L4 | 0.35 YE | 6817 | LED Backlight Dimming Control |
| L5 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| M1-M2 | -- | -- | Not Used |
| M3 | 0.35 YE | 6817 | LED Backlight Dimming Control |
| | 0.35 YE | 6817 | LED Backlight Dimming Control (C67 or C42) |
| M4 | -- | -- | Not Used |
| M5 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| N1 | 0.35 D-BU | 2307 | Passenger Air Bag On Indicator Control (AL0 or C99) |
| N2 | -- | -- | Not Used |
| N3 | 0.35 YE | 6817 | LED Backlight Dimming Control (JL1 or HP2) |
| | 0.35 YE | 6817 | LED Backlight Dimming Control (PTO) |
| N4 | 0.35 YE | 6817 | LED Backlight Dimming Control |
| | 0.35 YE | 6817 | LED Backlight Dimming Control |
| N5 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| P1 | 0.35 PU | 5234 | Passenger Seat Belt Indicator (AL0 or HP2) |
| P2 | -- | -- | Not Used |
| P3 | 0.35 D-GN | 2308 | Passenger Air Bag Off Indicator Control (AL0, C99 or HP2) |
| P4 | 3 RD/WH | 3740 | Battery Positive Voltage (except Y91) |
| P5 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |

# Junction Block - Left I/P X3 (except MEX)

**Connector Part Information**






Harness:
I/P Extension

OEM: 13516840

Service: 19149295

Description: 8-Way F GT 280 Series (GN)

**Terminal Part Information**

Terminal/Tray: 13525970/4

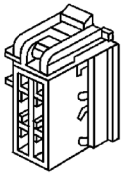
Core/Insulation Crimp: E/A

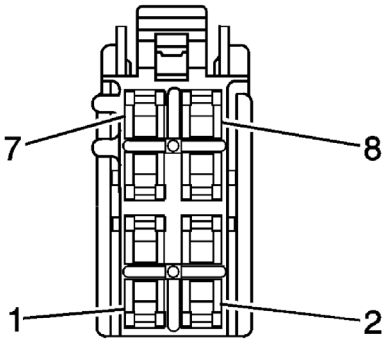
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 2 | 0.8 BK | 1050 | Ground (D07, YE9 or UQA) |
| 3 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 4 | -- | -- | Not Used |
| 5 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 6 | 3 RD/WH | 3740 | Battery Positive Voltage (except Y91) |
| 7 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 8 | -- | -- | Not Used |

# Junction Block - Left I/P X4 (except MEX)

**Connector Part Information**






Harness:
I/P Extension

OEM: 13516829

Service: 19115667

Description: 8-Way F GT 280 Series (OG)

**Terminal Part Information**

Pins: 4

Terminal/Tray: 13525969/4

Core/Insulation Crimp: F/D

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: 1, 2, 3, 5, 6, 7, 8

Terminal/Tray: 13525970/4

Core/Insulation Crimp: Pins 1, 2, 5, 6, 7 - E/A

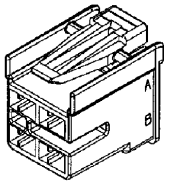
Core/Insulation Crimp: Pins 3, 8 - 2/A

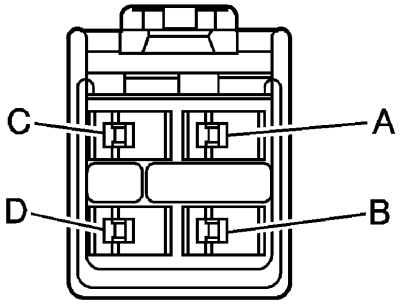
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data (except Y91) |
| | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data (except Y91) |
| 2 | 0.5 RD/WH | 340 | Battery Positive Voltage (UK6 without Y91) |
| | 0.5 RD/WH | 340 | Battery Positive Voltage (U2K without Y91) |
| 3 | 0.8 D-GN/WH | 817 | Vehicle Speed Signal (UUL or UUK) |
| 4 | 3 BK | 2550 | Ground (UQA without Y91) |
| 5 | 0.5 BK | 2550 | Ground (UE1 without Y91) |
| | 05 BK | 2550 | Ground (U2K without Y91) |
| 6 | 0.5 RD/WH | 3240 | Battery Positive Voltage (UE1 except Y91) |
| 7 | 0.5 BK | 2550 | Ground (U42 without Y91) |
| 8 | 0.8 RD/WH | 1040 | Battery Positive Voltage (UQA without Y91) |

# Junction Block - Left I/P X5 (SPO Alarm or SPO Heated Seats)

**Connector Part Information**






Harness: SPO Theft

OEM: 12194033

Service: Service by Harness - See Part Catalog

Description: 4-Way F Metri-Pack 280 Series (CM)

**Terminal Part Information**

Terminal/Tray: See Terminal Repair Kit

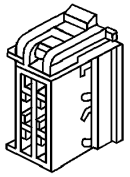
Core/Insulation Crimp: See Terminal Repair Kit

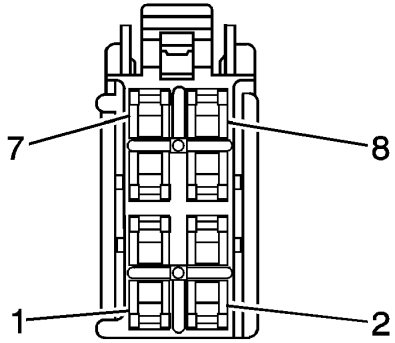
Release Tool/Test Probe: See Terminal Repair Kit

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A-B | -- | -- | Not Used |
| C | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data (SPO Heated Seats) |
| D | 0.5 RD/WH | 4540 | Battery Positive Voltage (SPO Alarm) |

# Junction Block - Left I/P X7 (JF4)

**Connector Part Information**






Harness: Body

OEM: 13516836

Service: 19149294

Description: 8-Way F GT 280 Series (OG)

**Terminal Part Information**

Pins: 1, 3, 5, 2, 4

Terminal/Tray: 13525970/4

Core/Insulation Crimp: Pins 1, 3, 5 - E/A

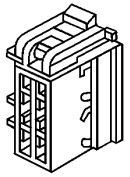
Core/Insulation Crimp: Pins 2, 4 - 2/A

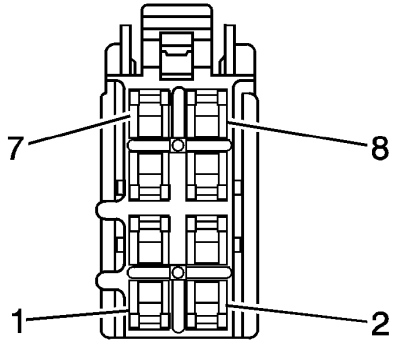
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.5 GY | 6206 | Low Reference (JF4 with AN3) |
| 2 | 1 YE | 5129 | Adjustable Pedals Relay Rearward Control (JF4) |
| 3 | 0.5 TN | 6207 | 5-Volt Reference (JF4 with AN3) |
| 4 | 1 PU | 5130 | Adjustable Pedals Actuator Forward Control (JF4) |
| 5 | 0.5 PK | 5289 | Adjustable Pedal Sensor Signal (JF4 with AN3) |
| 6-8 | -- | -- | Not Used |

# Junction Block - Left I/P X8 (except MEX)

**Connector Part Information**






Harness: Headliner

OEM: 13516835

Service: 19149293

Description: 8-Way F GT 280 Series (GN)

**Terminal Part Information**

Pins: 3, 4, 5, 6, 7

Terminal/Tray: 13525970/4

Core/Insulation Crimp: Pins 3 - 2/A

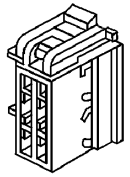
Core/Insulation Crimp: Pins 4, 5, 6, 7 - E/A

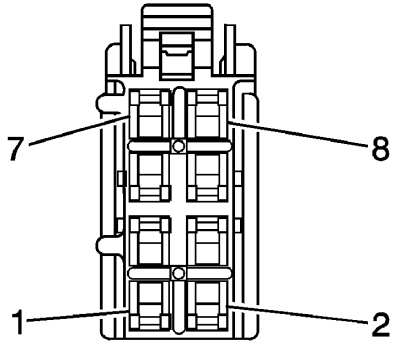
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1-2 | -- | -- | Not Used |
| 3 | 1 BK | 1050 | Ground |
| 4 | 0.35 YE | 43 | Accessory Voltage (A48) |
| 5 | 0.35 PU | 5234 | Passenger Seat Belt Indicator (AL0) |
| 6 | 0.35 D-BU | 2307 | Passenger Air Bag On Indicator Control (AL0 or C99) |
| 7 | 0.35 D-GN/BK | 2308 | Passenger Air Bag Off Indicator Control (AL0 or C99) |
| 8 | -- | -- | Not Used |

# Junction Block - Left I/P X9 (except MEX)

**Connector Part Information**






Harness: Headliner

OEM: 13516831

Service: 19149289

Description: 8-Way F GT 280 Series (BK)

**Terminal Part Information**

Terminal/Tray: 13525970/4

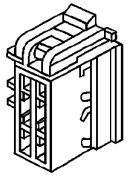
Core/Insulation Crimp: E/A

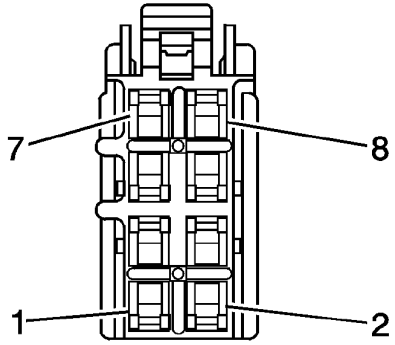
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.35 PK | 1639 | Ignition 1 Voltage (DL3 with DD8 or DRC) |
| | 0.35 PK | 1639 | Ignition 1 Voltage (YE9) |
| 2 | 0.35 WH/BK | 5515 | Inside Air Temperature Sensor Assembly Control (CJ2) |
| 3 | 0.5 OG | 1054 | Stop Lamp Supply Voltage Signal |
| 4 | 0.35 D-GN | 734 | Inside Air Temperature Sensor Signal (CJ2) |
| 5 | 0.35 PK | 1139 | Ignition 1 Voltage (AL0 or C99) |
| 6 | 0.5 WH/BK | 158 | Courtesy Lamp Supply Voltage |
| 7 | 0.35 D-GN | 6101 | Low Reference (CJ2) |
| 8 | 0.5 GY | 157 | Courtesy Lamp Control |
| | 0.5 GY | 157 | Courtesy Lamp Control (Extended Cab or Crew Cab) |

# Junction Block - Left I/P X10 (except MEX)

**Connector Part Information**






Harness: Headliner

OEM: 13516830

Service: 19149291

Description: 8-Way F GT 280 Series (GY)

**Terminal Part Information**

Terminal/Tray: 13525970/4

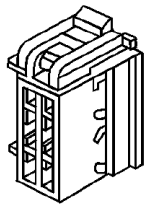
Core/Insulation Crimp: E/A

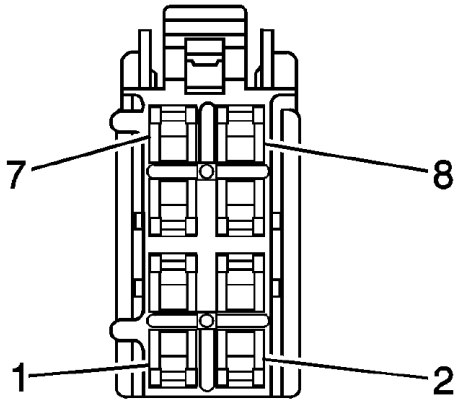
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.5 RD/WH | 240 | Battery Positive Voltage (TRW, 5Y0, 5X7 or UG1) |
| 2 | 0.35 OG | 6815 | Inadvertent Power Control |
| | 0.35 OG | 6815 | Inadvertent Power Control (Extended Cab or Crew Cab without YE9) |
| 3 | 0.35 PK | 1691 | Low Reference (DL3 with DD8 or DRC) |
| 4 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control |
| 5 | -- | -- | Not Used |
| 6 | 0.35 D-GN | 6134 | Linear Interconnect Network Bus (YE9) |
| 7 | 0.35 GY | 1690 | Automatic Day/Night Mirror Signal (DL3 with DD8 or DRC) |
| 8 | 0.35 D-BU | 38 | Backup Lamp Relay Control (YE9) |

# Junction Block - Left I/P X11 (except MEX)

**Connector Part Information**






Harness: Body

OEM: 13516833

Service: 19115668

Description: 8-Way F GT 280 Series (L-GY)

**Terminal Part Information**

Pins: 1, 2

Terminal/Tray: 13525969/4

Core/Insulation Crimp: F/D

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: 7 (except AL0 or HP2)

Pins: 4, 6, 8

Terminal/Tray: 13525970/4

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: 5

Terminal/Tray: 15304711/8

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: 7 (AL0 or HP2)

Terminal/Tray: 13525920/4

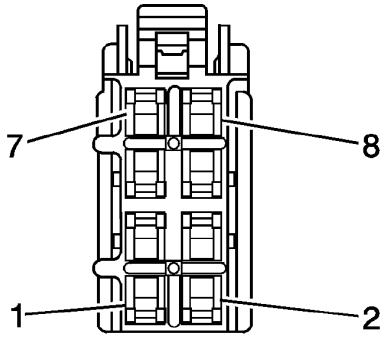
Core/Insulation Crimp: 2/A

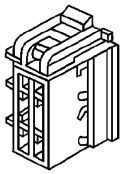
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 3 RD/WH | 1340 | Battery Positive Voltage (Crew Cab with A31 or HP2, or Extended Cab with ABV) |
| 2 | 3 RD/WH | 1440 | Battery Positive Voltage (AG2 or HP2) |
| 3 | -- | -- | Not Used |
| 4 | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control (Crew Cab with A31 and Y91) |
| | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control (Crew Cab with A31 and Y91) |
| 5 | 0.35 D-BU | 38 | Backup Lamp Relay Control |
| 6 | 0.35 PK | 1139 | Ignition 1 Voltage |
| 7 | 0.8 RD/WH | 4440 | Battery Positive Voltage (except AL0 or HP2) |
| | 0.5 RD/WH | 4440 | Battery Positive Voltage (AL0 or HP2) |
| | 0.5 RD/WH | 4440 | Battery Positive Voltage (AL0 or HP2) |
| 8 | -- | -- | Not Used |

# Junction Block - Left I/P X12 (except MEX)

**Connector Part Information**



Harness: Body

OEM: 13516834

Service: 19149292

Description: 8-Way F GT 280 Series (BN)

**Terminal Part Information**

Pins: 1, 2, 8

Terminal/Tray: 13525969/4

Core/Insulation Crimp: F/D

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: 6

Terminal/Tray: 13525970/4

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: 76

Terminal/Tray: 15304711/8

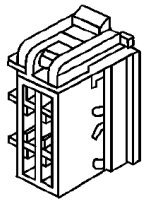
Core/Insulation Crimp: E2/A

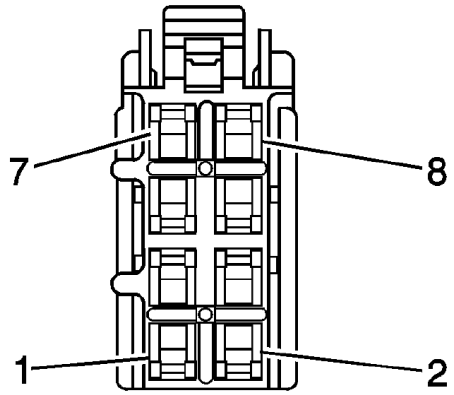
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 3 RD/WH | 5040 | Battery Positive Voltage (AG1 or HP2) |
| 2 | 3 RD/WH | 3440 | Battery Positive Voltage (A48) |
| 3-5 | -- | -- | Not Used |
| 6 | 1 WH/BK | 158 | Courtesy Lamp Supply Voltage |
| 7 | 0.35 PK | 239 | Ignition Voltage (KB6 except SPO Rearview Camera) |
| | 0.5 PK | 1639 | Ignition Voltage (KB6 with SPO Rearview Camera) |
| 8 | 3 BK | 2550 | Ground |

# Junction Block - Left I/P X13 (AN3)

**Connector Part Information**






Harness: Body

OEM: 13516832

Service: 19149290

Description: 8-Way F GT 280 Series (D-BU)

**Terminal Part Information**

Pins: 1, 2, 3, 4, 5, 6, 7, 8

Terminal/Tray: 13525970/4

Core/Insulation Crimp: Pins 1, 2 - 2/A

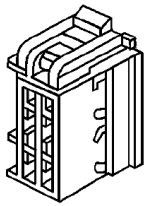
Core/Insulation Crimp: Pins 3, 4, 5, 6, 7, 8 - E/A

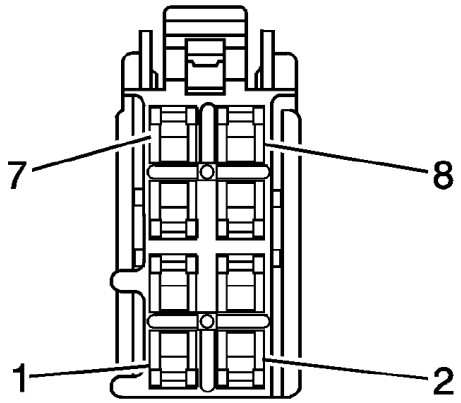
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 1 PU | 5130 | Adjustable Pedals Relay Forward Control |
| 2 | 1 YE | 5129 | Adjustable Pedals Relay Rearward Control |
| 3 | 0.35 PU | 5286 | Adjustable Pedals Relay Forward Control |
| 4 | 0.35 OG/BK | 5285 | Adjustable Pedals Relay Rearward Control |
| 5 | 0.5 TN | 6207 | Memory Sensor High Reference |
| 6 | 0.5 PK | 5289 | Adjustable Pedal Sensor Signal |
| 7 | 0.5 GY | 6206 | Low Reference |
| 8 | 0.35 PU/WH | 6205 | 12-Volt Reference |

# Junction Block - Left I/P X14 (5X7, 5Y0, 9L4, SPO DVD or SPO Heated Seats)

**Connector Part Information**






Harness: Brake Clutch

OEM: 13516837

Service: 13504592

Description: 8-Way F GT 280 Series (BK)

**Terminal Part Information**

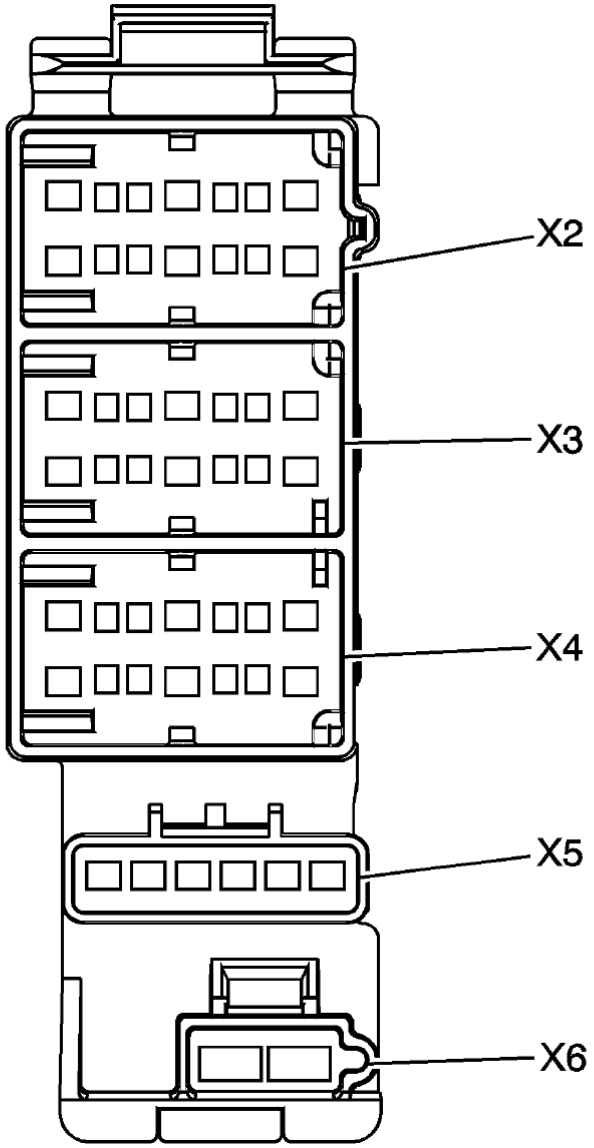
Terminal/Tray: 15325970/4

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

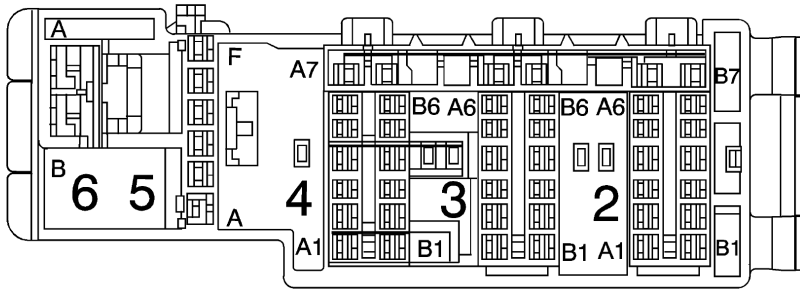
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.5 BK | 1050 | Ground (5Y0 or 5X7) |
| | BK | -- | Ground (SPO DVD) |
| | 2 BK | 1050 | Ground (SPO Heated Seats) |
| 2-4 | -- | -- | Not Used |
| 5 | 3 RD/WH | 2340 | Battery Positive Voltage (5Y0) |
| | 2 RD/WH | 2340 | Battery Positive Voltage (SPO Heated Seats) |
| 6 | -- | -- | Not Used |
| 7 | RD | -- | Ignition Voltage (SPO DVD) |
| 8 | 0.5 YE | 43 | Accessory Voltage (9L4) |

## Junction Block - Right I/P, Top View



# Junction Block - Right I/P (Wire Entry)

**Connector Part Information**




Harness:
Instrument Panel

OEM: 13604154

Service:Pending

Description: 50-Way M GT 150/280 Metri-Pack 630(BK)

**Terminal Part Information**

Pins: 2A4 (except NQH)

Pins: 2B4, 3B1, 5A, 5C, 5D, 5E, 5F

Terminal/Tray: 15304722/8

Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: 3A1

Pins: 2A4 (NQH)

Terminal/Tray: 15304724/8

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: 2B4, 3B1, 5A, 5C, 5D, 5E, 5F

Terminal/Tray: 15304722/8

Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: 3A2

Terminal/Tray: 15304702/19

Core/Insulation Crimp: 2/4

Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: 3A4

Terminal/Tray: 15304724/8

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: See Terminal Repair Kit

Pins: 2A2, 2A3, 2B6, 2B7, 3A7, 4A1, 4A2, 4A3, 4A4, 4A5, 4A6, 4B2, 4B3, 4B5, 4B6, 4B7, 5B

Terminal/Tray: 15304724/8

Core/Insulation Crimp: See Terminal Repair Kit

Release Tool/Test Probe: See Terminal Repair Kit

Pins: 2B3

Terminal/Tray: 15304702/19

Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-3 (G9)

Pins: 2B1, 3B4

Terminal/Tray: 15304724/8

Core/Insulation Crimp: C/D

Release Tool/Test Probe: See Terminal Repair Kit

*(continued on next page)*

## Junction Block - Right I/P (Wire Entry) (cont'd)

Pins: 4A7

Terminal/Tray: Not Serviced in Kit

Core/Insulation Crimp: See Terminal Repair Kit

Release Tool/Test Probe: See Terminal Repair Kit

Pins: 6A

Terminal/Tray: 12066493/3

Core/Insulation Crimp: B/G

Release Tool/Test Probe: 12094430/J-35616-43 (RD)

Pins: 6B

Terminal/Tray: 12066493/3

Core/Insulation Crimp: F/G

Release Tool/Test Probe: 12094430/J-35616-43 (RD)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 2A1 | 0.5 RD/WH | 1540 | Battery Positive Voltage (U42 or HP2) |
| 2A2 | 0.35 TN | 481 | Outside Moisture Signal 1 (10 Series without MEX or 8S8) |
| 2A3 | 0.35 L-GN | 482 | Outside Moisture Signal 2 (10 Series without MEX or 8S8) |
| 2A4 | 0.35 WH | 2283 | Ignition Voltage (10 Series without MEX or 8S8) |
| | 0.35 WH | 2283 | Ignition Voltage (NQH) |
| 2A5-2A6 | -- | -- | Not Used |
| 2A7 | 3 BK | 1050 | Ground |
| 2B1 | 3 RD/WH | 3140 | Battery Positive Voltage (except MEX) |
| 2B2 | 0.5 BN | 2509 | Left Front Park Lamps Supply Voltage (except MEX or 8S8) |
| 2B3 | 0.35 YE | 43 | Accessory Voltage (except MEX or 8S8) |
| 2B4 | 0.5 BN/WH | 230 | Instrument Panel Lamp Dimming Control (except MEX or 8S8) |
| 2B5 | 0.5 WH | 5990 | Emergency Lamp Switch Signal (5Y0 or 5X7 except MEX) |
| 2B6 | 0.5 BK | 1050 | Ground (except MEX or 8S8) |
| 2B7 | 0.35 OG | 300 | Ignition 3 Voltage (EXP with CF5) |
| 3A1 | 0.8 D-GN | 117 | Right Front Speaker Output (-) |
| 3A2 | 0.8 L-GN | 200 | Right Front Speaker Output (+) |
| 3A3 | 0.35 BK | 1850 | Ground (except SLT) |
| 3A4 | 0.8 D-BU/WH | 1315 | Right Front Turn Signal Lamp Supply Voltage (DL3, DPN or HP2) |
| | 0.8 D-BU/WH | 1315 | Right Front Turn Signal Lamp Supply Voltage (DL3, DPN or HP2) |
| | 0.35 L-BU | 244 | Passenger Door Lock Switch Lock Signal (AU3 without YE9) |
| 3A5 | 0.35 TN/WH | 746 | Right Front Door Ajar Switch Signal (HP2 or except AN3 or DL3) |
| 3A6 | 0.8 GY | 295 | Door Lock Actuator Lock Control (HP2 or AU3 without AN3 or DL3) |
| 3A7 | 3 BK | 1050 | Ground |
| 3B1 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data (HP2 or YE9 with AN3 or DL3) |
| 3B2 | 0.8 RD/WH | 240 | Battery Positive Voltage (YE9, Y91 or HP2) |

*(continued on next page)*

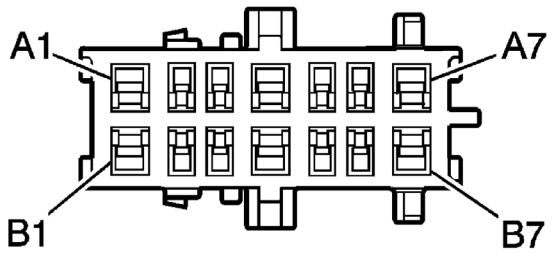
## Junction Block - Right I/P (Wire Entry) (cont'd)

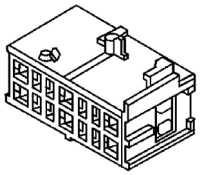
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 3B2 | 0.8 RD/WH | 240 | Battery Positive Voltage (YE9, Y91 or HP2) |
| 3B3 | 0.8 TN | 294 | Door Lock Actuator Unlock Control (HP2 or AU3 without AN3 or DL3) |
| 3B4 | 2 RD/WH | 1340 | Battery Positive Voltage (HP2 or A31) |
| | 0.35 D-BU | 245 | Passenger Door Lock Switch Unlock Signal (AU3 without YE9) |
| 3B5 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (HP2 or AU3) |
| 3B6 | -- | -- | Not Used |
| 3B7 | -- | -- | Ground Bus |
| 4A1 | 0.35 GY | 598 | 5-Volt Reference |
| 4A2 | 0.35 TN | 520 | Lower Right Air Temperature Sensor Signal (CJ2) |
| | 0.35 TN | 552 | Low Reference (C67) |
| 4A3 | 0.35 TN | 518 | Lower Left Air Temperature Sensor Signal (CJ2) |
| 4A4 | 0.35 YE | 1791 | Low Reference |
| 4A5 | 0.35 PU | 1838 | Recirculation Door Position Signal (CJ2) |
| 4A6 | 0.35 GY/BK | 754 | Blower Motor Speed Control |
| 4A7 | -- | -- | Ground Bus |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 4B1 | -- | -- | 5-Volt Reference Bus |
| 4B2 | 0.35 D-BU | 1199 | Air Temperature Door Control (CJ2) |
| 4B3 | 0.35 TN | 2273 | Mode Door Control |
| 4B4 | -- | -- | Low Reference Bus |
| 4B5 | 0.35 YE/BK | 713 | Defrost/Heater Mode Valve Position Sensor Signal |
| 4B6 | 0.35 L-BU | 733 | Air Temperature Door Position Signal (CJ2) |
| 4B7 | 0.35 WH | 2622 | Evaporator Temperature Sensor Signal (except HP2) |
| 5A | 0.35 D-GN | 6101 | Low Reference (CJ2) |
| 5B | 0.35 PK | 839 | Ignition 1 Voltage |
| 5C | 0/35 PK | 839 | Ignition 1 Voltage |
| | 0/35 PK | 839 | Ignition 1 Voltage |
| 5D | 0.35 D-BU | 1646 | Auxiliary Air Temperature Door Position Signal |
| 5E | 0.35 WH/BK | 1236 | Auxiliary Air Temperature Door Control |
| 5F | 0.35 D-GN | 1614 | Recirculation Door Control (MEX except C42 or except MEX) |
| 6A | 5 RD/BK | 542 | Battery Positive Voltage |
| 6B | 3 BK | 1050 | Ground |
| | 3 BK | 1050 | Ground |

# Junction Block - Right I/P X2

**Connector Part Information**



Harness: Right A-Pillar

OEM: 15467621

Service: 19115663

Description: 14-Way F GT 150/280 Series (GY)

**Terminal Part Information**

Pins: B2, B3

Terminal/Tray: 12191812/19

Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: A7, B1

Terminal/Tray: 15304713/19

Core/Insulation Crimp: F/D

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: A7, B4

Terminal/Tray: 15304711/8

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | 0.5 RD/WH | 1540 | Battery Positive Voltage (U42) |
| A2 | 0.35 TN | 481 | Outside Moisture Signal 1 (CE1) |
| A3 | 0.35 L-GN | 482 | Outside Moisture Signal 2 (CE1) |
| A4 | 0.35 WH | 2283 | Ignition Voltage (CE1) |
| A5-A6 | -- | -- | Not Used |
| A7 | 3 BK | 1050 | Ground (CF5 or TRW) |
| | 0.5 BK | 1050 | Ground (U01) |
| B1 | 3 RD/WH | 3140 | Battery Positive Voltage (CF5 or TRW) |
| B2 | 0.5 BN | 2509 | Left Front Park Lamps Supply Voltage (U01) |
| B3 | 0.35 YE | 43 | Accessory Voltage (CF5) |
| B4 | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control (CF5) |
| B5 | 0.5 WH | 5990 | Emergency Lamp Switch Signal (5Y0 or 5X7) |
| B6 | 0.35 BK | 1050 | Ground (CE1) |
| B7 | -- | -- | Not Used |

# Junction Block - Right I/P X3

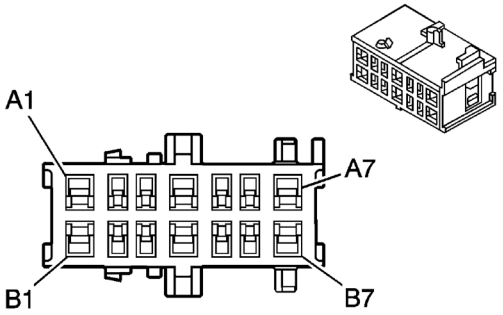
**Connector Part Information**

Harness:
Right Front Door

OEM: 15467622

Service: 19115664

Description: 14-Way F
GT 150/280 Series (L-GY)




**Terminal Part Information**

Pins: A1 (UQ3 or UQ5)
Pins: A4, B1, B4
Terminal/Tray: 15304711/8
Core/Insulation Crimp: - E/A
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: A1 (UQA)
Terminal/Tray: 15304711/8
Core/Insulation Crimp: - 2/A
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: A2 (UQ3 or UQ5)
Pins: A3, A5, B5, B6
Terminal/Tray: 12191812/19
Core/Insulation Crimp: - E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

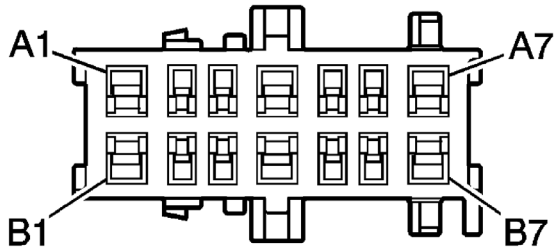
Pins: A2 (UQA)
Pins: A6, B2, B3
Terminal/Tray: 12191812/19
Core/Insulation Crimp: - C/A
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

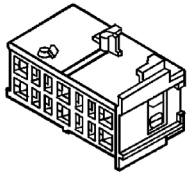
Pins: A7, B4, A7
Terminal/Tray: 15304713/19
Core/Insulation Crimp: Pins A7, B4, B4 - 4/4
Core/Insulation Crimp: Pins A7 - F/D
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | 0.8 D-GN | 117 | Right Front Speaker Output (-) (UQA) |
| | 0.5 D-GN | 117 | Right Front Speaker Output (-) (UQ3 or UQ5) |
| A2 | 0.8 L-GN | 200 | Right Front Speaker Output (+) (UQA) |
| | 0.5 L-GN | 200 | Right Front Speaker Output (+) (UQ3 or UQ5) |
| A3 | 0.35 BK | 1850 | Ground (except AN3 or DL3) |
| A4 | 0.5 D-BU/WH | 1315 | Right Front Turn Signal Lamp Supply Voltage (DL3 or DPN) |
| | 0.35 L-BU | 244 | Passenger Door Lock Switch Lock Signal (AU3 without YE9) |
| A5 | 0.35 TN/WH | 746 | Right Front Door Ajar Switch Signal (except AN3 or DL3) |
| A6 | 1 GY | 295 | Door Lock Actuator Lock Control (AU3 without AN3 or DL3) |
| A7 | 3 BK | 1050 | Ground (A31, AN3, DL3, DL8 or DPN) |
| B1 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data (AN3 or DL3) |
| B2 | 0.8 RD/WH | 240 | Battery Positive Voltage (AN3 or DL3) |
| B3 | 1 TN | 294 | Door Lock Actuator Unlock Control (AU3 without AN3 or DL3) |
| B4 | 2 RD/WH | 1340 | Battery Positive Voltage (A31) |
| | 0.35 D-BU | 245 | Passenger Door Lock Switch Unlock Signal (AU3 without YE9) |
| B5 | 0.35 BN/WH | 230 | Instrument Panel Lamps Dimming Control (AU3 without AN3 or DL3) |
| B6-B7 | -- | -- | Not Used |

# Junction Block - Right I/P X4

**Connector Part Information**



Harness: Front HVAC Module

OEM: 15467620

Service: 19115662

Description: 14-Way F GT 150 280 Series (BK)

**Terminal Part Information**

Pins: A1, A4, B1, B4

Terminal/Tray: 15304711/8

Core/Insulation Crimp: 2/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: A2, A3, A5, A6, B2, B3, B5, B6, B7

Terminal/Tray: 12191812/19

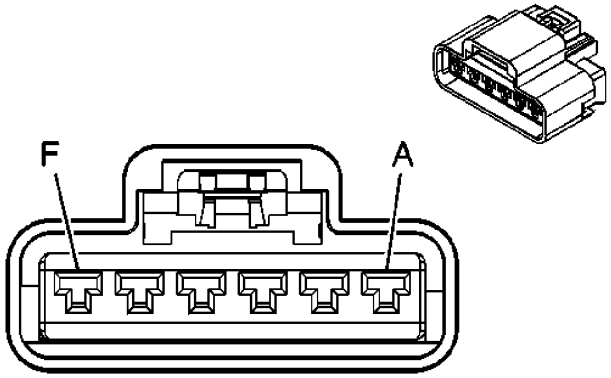
Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A1 | 0.35 L-BU/BK | 598 | 5-Volt Reference |
| | 0.35 L-BU/BK | 598 | 5-Volt Reference (C67 or CJ2) |
| A2 | 0.35 GY/BK | 520 | Lower Right Air Temperature Sensor Signal (CJ2) |
| | 0.35 TN | 552 | Low Reference (C67) |
| A3 | 0.35 WH/BK | 518 | Lower Left Air Temperature Sensor Signal (CJ2) |
| A4 | 0.35 YE | 1791 | Low Reference |
| | 0.35 YE | 1791 | Low Reference (C67 or CJ2) |
| A5 | 0.35 PU | 1838 | Recirculation Door Position Signal (CJ2) |
| A6 | 0.35 PU/WH | 754 | Blower Motor Speed Control |
| A7 | -- | -- | Not Used |
| B1 | 0.35 L-BU/BK | 598 | 5-Volt Reference |
| | 0.35 L-BU/BK | 598 | 5-Volt Reference (CJ2) |
| B2 | 0.35 D-BU | 1199 | Left Air Temperature Door Control (CJ2) |
| B3 | 0.35 TN | 2273 | Mode Door Control |
| B4 | 0.35 YE | 1791 | Low Reference |
| | 0.35 YE | 1791 | Low Reference (CJ2) |
| B5 | 0.35 L-GN | 713 | Mode Door Position Signal |
| B6 | 0.35 L-BU | 733 | Left Air Temperature Door Position Signal (CJ2) |
| B7 | 0.35 WH | 2622 | Evaporator Temperature Sensor Signal (except HP2) |

# Junction Block - Right I/P X5

**Connector Part Information**




Harness: Front HVAC Module

OEM: 15326900

Service:19180278

Description: 6-Way F GT 280 Series (BK)

**Terminal Part Information**

Terminal/Tray: 15304711/8

Core/Insulation Crimp: Pins A-C: 2/A

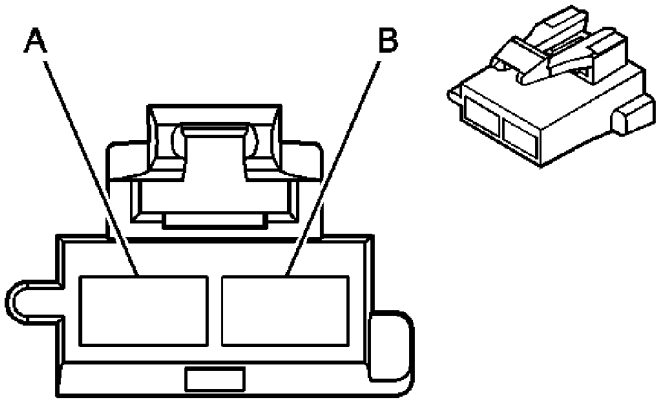
Core/Insulation Crimp: Pins D-F: E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.35 BN | 6101 | Low Reference (CJ2) |
| B | 0.35 BN | 839 | Ignition 1 Voltage |
| | 0.35 BN | 839 | Ignition 1 Voltage (C67 or CJ2) |
| C | 0.35 BN | 839 | Ignition 1 Voltage |
| | 0.35 BN | 839 | Ignition 1 Voltage (CJ2) |
| D | 0.35 D-BU | 1646 | Right Air Temperature Door Position Signal |
| E | 0.35 WH/BK | 1236 | Right Air Temperature Door Control |
| F | 0.35 D-GN | 1614 | Recirculation Door Control (C67 or CJ2) |

# Junction Block - Right I/P X6

**Connector Part Information**




Harness: Front HVAC Module

OEM: 12129939

Service:1219939

Description: 2-Way F Metri-Pack 630 Series (BK)

**Terminal Part Information**

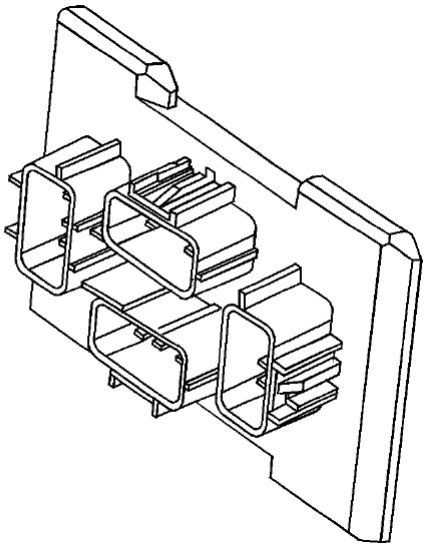
Terminal/Tray: 12084590/3

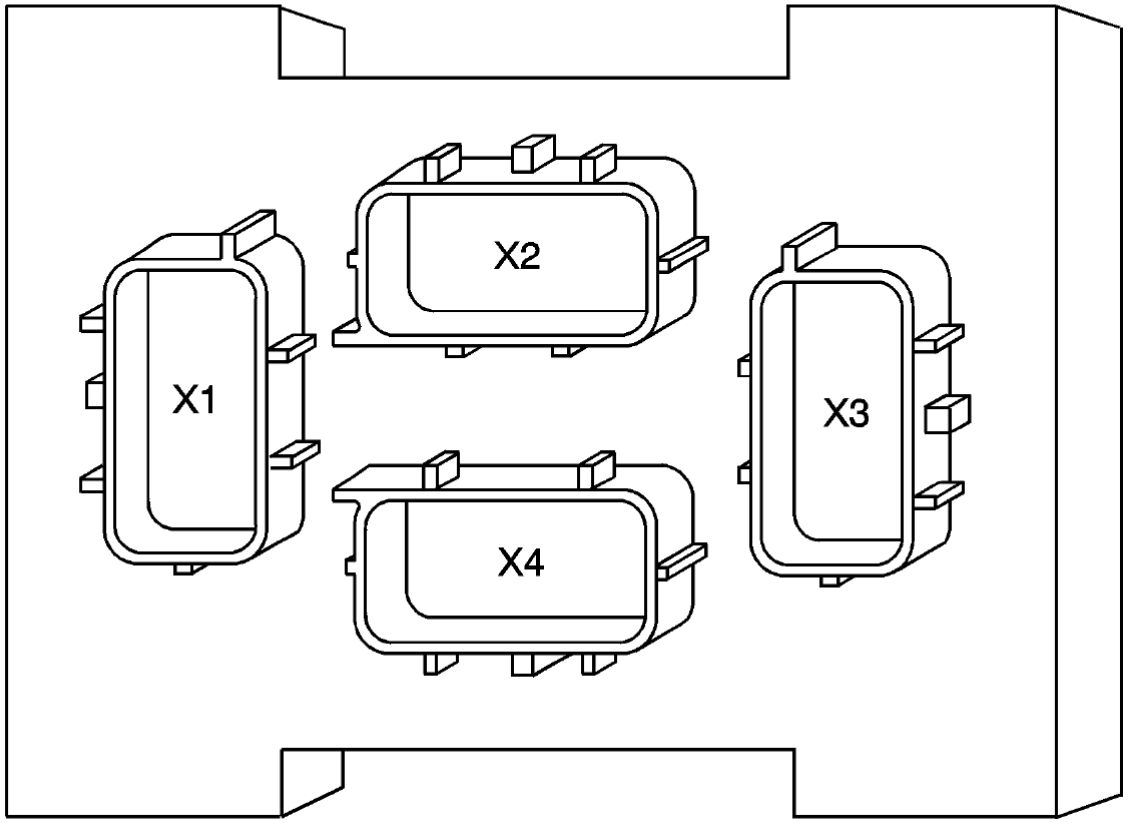
Core/Insulation Crimp: F/G

Release Tool/Test Probe: 12094430/J-35616-42 (RD)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 3 RD | 542 | Battery Positive Voltage |
| B | 3 BK | 1050 | Ground |

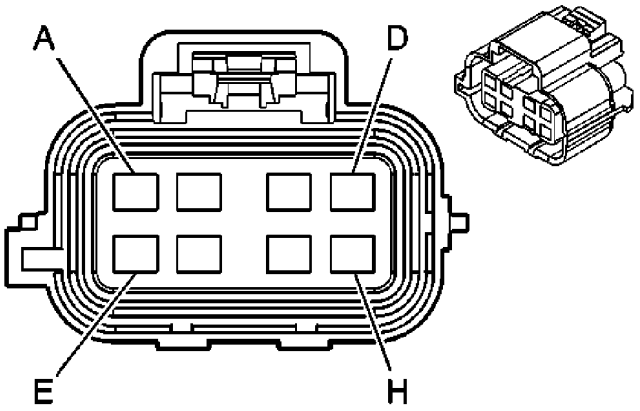
## Junction Block - Rear Lamps





# Junction Block - Rear Lamps X1

**Connector Part Information**




Harness: Chassis

OEM: 15317304

Service: 19167008

Description: 8-Way F GT 280 Sealed (BU)

**Terminal Part Information**

Pins: A, C, D, G, H

Terminal/Tray: 15304716/8

Core/Insulation Crimp: 2/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B, E

Terminal/Tray: 15304717/8

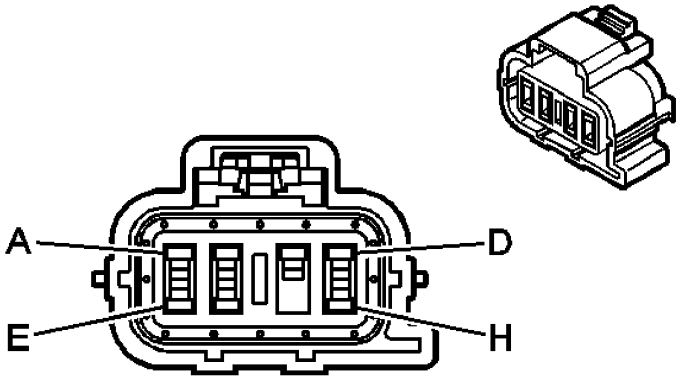
Core/Insulation Crimp: 4/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.8 YE | 18 | Left Rear Stop/Turn Lamp Supply Voltage |
| B | 2 BK | 2150 | Ground |
| C | 0.8 L-GN | 24 | Backup Lamp Supply Voltage |
| D | 0.8 BN | 2609 | Right Rear Park Lamps Supply Voltage |
| E | 2 BK | 1750 | Ground (except MEX) |
| | 3 BK | 1750 | Ground (MEX) |
| F | -- | -- | Not Used |
| G | 0.8 BN | 2509 | Left Rear Park Lamps Supply Voltage |
| H | 0.8 D-GN | 19 | Right Rear Stop/Turn Lamp Supply Voltage |

# Junction Block - Rear Lamps X2

**Connector Part Information**




Harness: Rear Bumper

OEM: 15317305

Service: 15306338

Description: 8-Way F GT 280 Sealed (GY)

**Terminal Part Information**

Pins: A, C, D, G, H

Terminal/Tray: 15304716/8

Core/Insulation Crimp: 2/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B, E

Terminal/Tray: 15304717/8

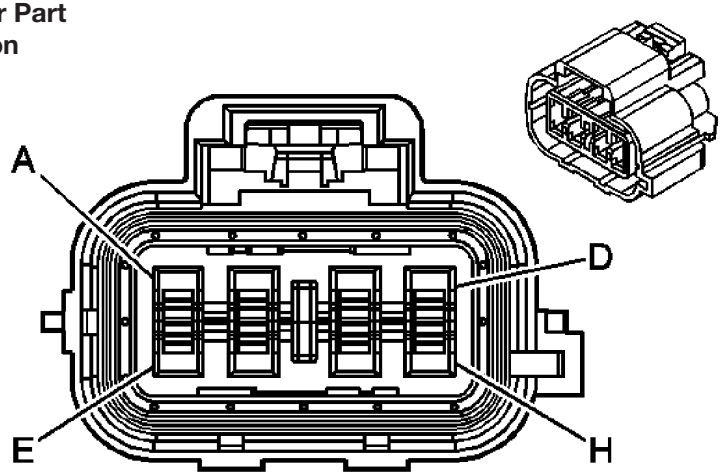
Core/Insulation Crimp: 4/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A-B | -- | -- | Not Used |
| C | 0.8 BK | 1750 | Ground |
| D | -- | -- | Not Used |
| E | 0.8 BN | 2509 | Left Rear Park Lamps Supply Voltage |
| F | 0.8 L-GN | 24 | Backup Lamp Supply Voltage |
| G | -- | -- | Not Used |
| H | 0.8 YE | 18 | Left Rear Stop/Turn Lamp Supply Voltage |

# Junction Block - Rear Lamps X3

**Connector Part Information**




Harness: Rear Bumper

OEM: 15317308

Service: 15306135

Description: 8-Way F GT 280 Sealed 5.2 (BN)

**Terminal Part Information**

Terminal/Tray: 15304716/8

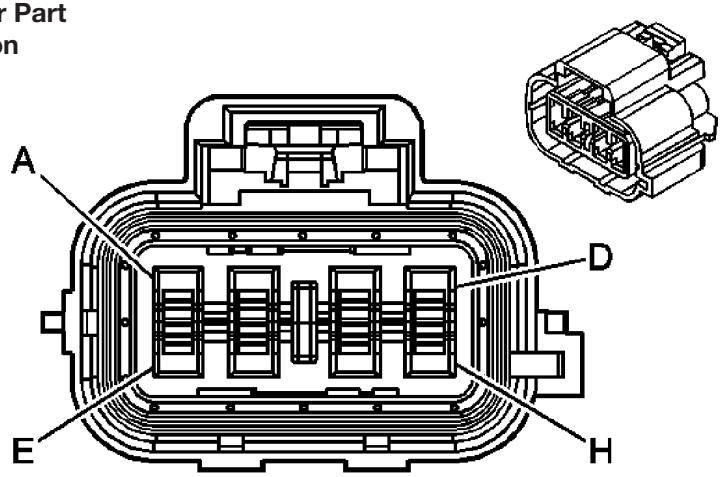
Core/Insulation Crimp: E/1

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 BN | 2609 | Right Rear Park Lamps Supply Voltage |
| B | 0.5 BN | 2609 | Right Rear Park Lamps Supply Voltage (R05) |
| C | 0.5 BK | 1750 | Ground (R05) |
| D | 0.5 BK | 1750 | Ground (R05) |
| E | 0.5 BK | 1750 | Ground |
| F | 0.5 BN | 2509 | Left Rear Park Lamps Supply Voltage (R05) |
| G | 0.5 BN | 2509 | Left Rear Park Lamps Supply Voltage |
| H | 0.5 BK | 1750 | Ground |

# Junction Block - Rear Lamps X4

**Connector Part Information**




Harness: Rear Bumper

OEM: 15317306

Service: 15306339

Description: 8-Way F GT 280 Sealed 5.2 (BK)

**Terminal Part Information**

Terminal/Tray: 15304716/8

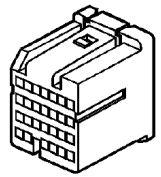
Core/Insulation Crimp: E/1

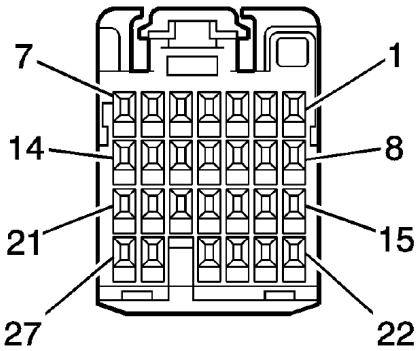
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.8 BK | 2150 | Ground |
| B | 0.8 BN | 2609 | Right Rear Park Lamps Supply Voltage |
| C-D | -- | -- | Not Used |
| E | 0.8 L-GN | 24 | Backup Lamp Supply Voltage |
| F | 0.8 D-GN | 19 | Right Rear Stop/Turn Lamp Supply Voltage |
| G-H | -- | -- | Not Used |

# Body Control Module (BCM) X1

**Connector Part Information**






Harness:
Steering Column

OEM: 15482789

Service: 88988838

Description: 27-Way F Receptacle 0.64 2.8 (L-GN)

**Terminal Part Information**

Pins: 1-9, 14-21, 23-26

Terminal/Tray: SNAC3-A021T-M0.64/20

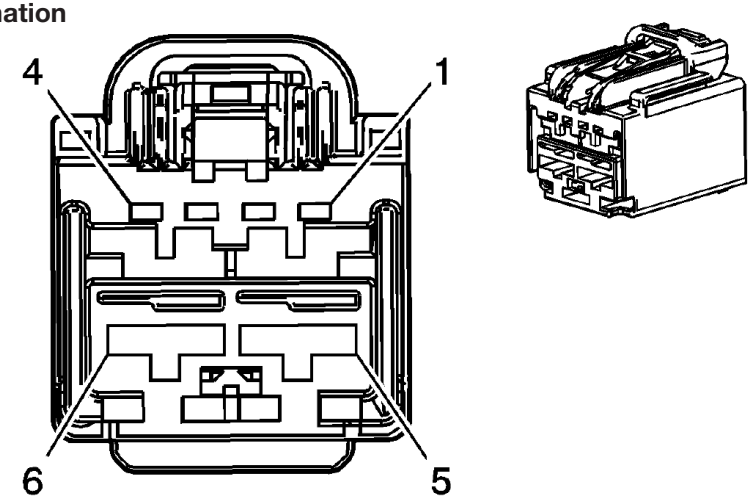
Core/Insulation Crimp: J/J

Release Tool/Test Probe: 12094429/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | -- | -- | Not Used |
| 2 | 0.35 PK/BK | 1020 | Ignition 3 Voltage |
| 3 | 0.35 GY | 1884 | Cruise Control Switch Signal (K34) |
| 4 | 0.35 WH | 530 | 5-Volt Reference |
| 5 | 0.35 L-GN | 1715 | Windshield Wiper Switch High Signal |
| 6 | 0.35 L-GN | 6818 | Steering Wheel Control Switch Signal (UK3) |
| 7 | -- | -- | Not Used |
| 8 | 0.35 TN/BK | 6009 | Low Reference |
| 9 | 0.35 L-BU | 1714 | Windshield Wiper Switch Low Signal |
| 10-13 | -- | -- | Not Used |
| 14 | 0.35 PK | 3 | Ignition 1 Voltage |
| 15 | 0.35 D-GN | 663 | Hazard Switch Left Turn Signal |
| 16 | 0.35 TN | 664 | Hazard Switch Right Turn Signal |
| 17 | 0.35 PK | 1444 | 12-Volt Reference |
| 18 | 0.35 YE | 525 | Headlamp Dimmer Switch Signal |
| 19 | 0.35 WH | 111 | Hazard Switch Signal |
| 20 | 0.5 PU | 5526 | Tap Up/Tap Down Switch Signal (MYC, MYD, M99 or MW7) |
| 21 | 0.35 BN | 4 | Accessory Voltage |
| 22 | -- | -- | Not Used |
| 23 | 0.35 L-BU | 553 | Tow/Haul Switch Signal (MYC, MYD, M99 or MW7) |
| 24 | 0.35 PK | 94 | Windshield Washer Switch Signal |
| 25 | 0.35 YE/BK | 307 | Headlamp Flash to Pass Signal |
| 26 | 0.35 TN/WH | 816 | A/T Shift Lock Solenoid Supply Voltage |
| 27 | -- | -- | Not Used |

# Blower Motor Control Module X2

**Connector Part Information**






Harness:
Front HVAC Module

OEM: 13520671

Service: 88988512

Description: 6-Way F GT 150 6.3 Series (BK)

**Terminal Part Information**

Terminal/Tray: See Terminal Repair Kit

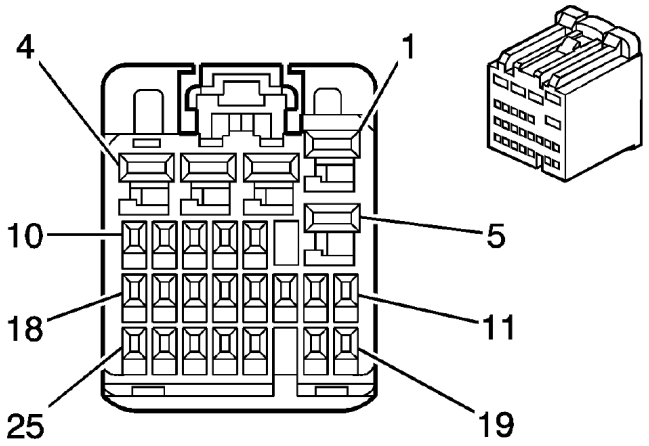
Core/Insulation Crimp: See Terminal Repair Kit

Release Tool/Test Probe: See Terminal Repair Kit

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1-2 | -- | -- | Not Used |
| 3 | 0.35 PU/WH | 754 | Blower Motor Speed Control |
| 4 | -- | -- | Not Used |
| 5 | 3 BK | 1050 | Ground |
| 6 | 3 RD | 542 | Battery Positive Voltage |

# Body Control Module (BCM) X2

**Connector Part Information**




Harness:
Instrument Panel

OEM: 15482790

Service: 88988839

Description: 25-Way F HIT Series (WH)

**Terminal Part Information**

Pins: 1-3, 5

Terminal/Tray: SNAC-A061T-M2.8/20

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 12094429/J-35616-4A (PU)

Pins: 8, 11-12, 17-18, 21-22, 25

Terminal/Tray: SNAC3-A021T-M0.64/20

Core/Insulation Crimp: J/J

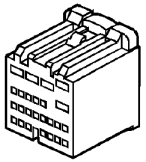
Release Tool/Test Probe: 12094429/J-35616-64B (L-BU)

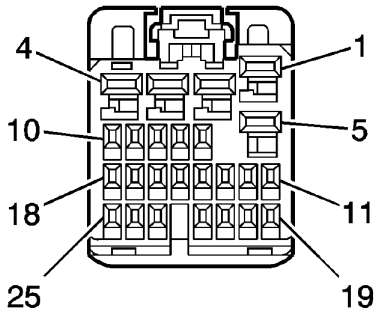
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.5 OG | 6815 | Inadvertent Power Supply Voltage |
| 2 | 0.5 RD/WH | 2540 | Battery Positive Voltage |
| 3 | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control |
| 4 | -- | -- | Not Used |
| 5 | 0.5 GY | 157 | Courtesy Lamp Control |
| 6-7 | -- | -- | Not Used |
| 8 | 0.35 L-BU | 13 | Headlamp Switch Park Lamps Signal |
| 9-10 | -- | -- | Not Used |
| 11 | 0.35 WH | 278 | Ambient Light Sensor Signal |
| 12 | 0.35 WH | 103 | Headlamp Switch Headlamps On Signal |
| 13-16 | -- | -- | Not Used |
| 17 | 0.35 D-GN | 306 | Headlamp Switch Headlamps Off Signal |
| 18 | 0.35 D-BU/ WH | 149 | Courtesy Lamp Supply Voltage |
| 19-20 | -- | -- | Not Used |
| 21 | 0.35 L-BU | 1788 | Traction Control Switch Signal (JL4) |
| 22 | 0.35 YE | 43 | Accessory Voltage (except MEX) |
| 23-24 | -- | -- | Not Used |
| 25 | 0.35 PU | 328 | Interior Lamp Defeat Switch Signal |

*(continued on next page)*

# Body Control Module (BCM) X3

**Connector Part Information**






Harness:
Instrument Panel

OEM: 15482791

Service: 88988840

Description: 25-Way F HIT Series (L-BU)

**Terminal Part Information**

Pins: 1-3, 5

Terminal/Tray: SNAC-A061T-M2.8/20

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 12094429/J-35616-4A (PU)

Pins: 7-13, 16-19, 21, 22, 25

Terminal/Tray: SNAC3-A021T-M0.64/20

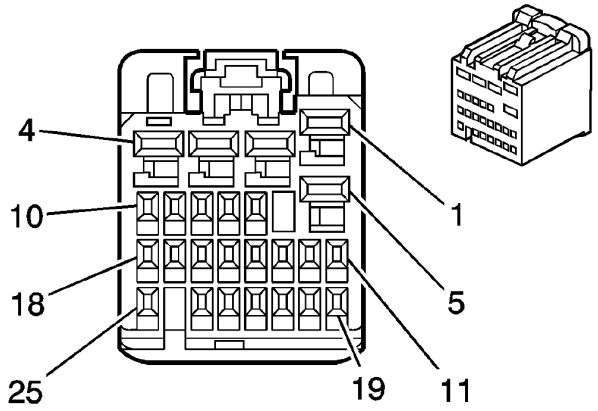
Core/Insulation Crimp: J/J

Release Tool/Test Probe: 12094429/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.8 BK/WH | 1851 | Ground (MEX) |
| 2 | 0.8 RD/WH | 2140 | Battery Positive Voltage (except HP2 or except 8S8) |
| | 0.5 RD/WH | 2140 | Battery positive Voltage (HP2 or 8S8) |
| 3 | 0.5 RD/WH | 3840 | Battery Positive Voltage |
| 4 | -- | -- | Not Used |
| 5 | 0.8 BK/WH | 1851 | Ground (MEX) |
| | 1 BK/WH | 1851 | Ground (except MEX) |
| 6 | -- | -- | Not Used |
| 7 | 0.5 GY | 728 | Security Indicator Control (SPO Alarm) |
| 8 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 9 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 10 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data |
| 11 | 0.35 D-GN | 44 | Instrument Panel Lamp Dimmer Switch Signal |
| 12 | 0.35 OG/WH | 812 | 12-Volt Reference |
| 13 | 0.35 PU | 7062 | Brake Switch Signal |
| 14-15 | -- | -- | Not Used |
| 16 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 17 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 18 | 0.35 YE | 6817 | LED Backlight Dimming Control |
| 19 | 0.35 L-BU | 5986 | Serial Data Communication Enable (except MEX) |
| 20 | -- | -- | Not Used |
| 21 | 0.35 OG | 192 | Front Fog Lamp Switch Signal/ Fog Lamps Enable (T96) |
| 22 | 0.35 L-GN/ WH | 7158 | Cruise Control Indicator Dimming Signal (except MEX) |
| 23-24 | -- | -- | Not Used |
| 25 | 0.35 PU/WH | 6816 | Indicator Dimming Control (except MEX) |

# Body Control Module (BCM) X4

**Connector Part Information**




Harness:
Instrument Panel

OEM: 15482792

Service: 88988841

Description: 25-Way F HIT Series (BK)

**Terminal Part Information**

Pins: 1-5

Terminal/Tray: SNAC-A061T-M2.8/20

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 12094429/J-35616-4A (PU)

Pins: 6, 7, 9-21, 23

Terminal/Tray: SNAC3-A021T-M0.64/20

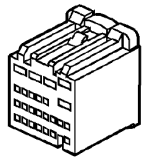
Core/Insulation Crimp: J/J

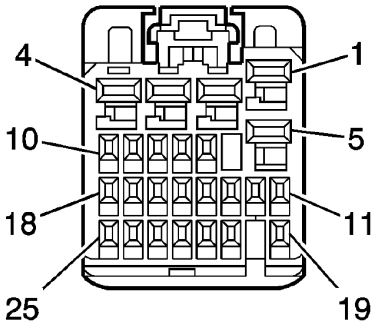
Release Tool/Test Probe: 12094429/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.8 RD/WH | 2740 | Battery Positive Voltage |
| 2 | 0.8 RD/WH | 3040 | Battery Positive Voltage |
| 3 | 0.8 RD/WH | 2940 | Battery Positive Voltage |
| 4 | 0.8 RD/WH | 2240 | Battery Positive Voltage |
| 5 | 0.5 D-BU/WH | 1315 | Right Front Turn Signal Lamp Supply Voltage (except HP2) |
| | 0.8 D-BU/WH | 1315 | Right Front Turn Signal lamp Supply Voltage (HP2) |
| 6 | 0.35 D-GN | 6134 | Linear Interconnect Network Bus (YE9, Y91 or HP2) |
| 7 | 0.35 YE | 196 | Windshield Wiper Motor Park Switch Signal |
| 8 | -- | -- | Not Used |
| 9 | 0.5 BK/WH | 451 | Ground (except MEX) |
| 10 | 0.35 RD/WH | 2840 | Battery Positive Voltage (except MEX) |
| 11 | 0.35 D-GN/WH | 1317 | Fog Lamp Relay Control (T96 or HP2) |
| 12 | 0.35 YE | 5187 | Right Trailer Turn Signal Lamp (except TZ0) |
| | 0.5 PU | 16 | Turn Signal Flasher Signal (TZ0) |
| 13 | 0.35 OG | 5186 | Left Trailer Turn Signal Lamp (except TZ0) |
| | 0.5 PU | 16 | Turn Signal Flasher Signal (TZ0) |
| 14 | 0.35 L-GN | 482 | Outside Moisture Sensor Signal 2 (CE1 or HP2) |
| 15 | 0.5 OG | 2268 | Windshield Washer Relay Control |
| 16 | 0.35 TN/WH | 1969 | Headlamp High Beam Relay Control |
| 17 | 0.35 PK/BK | 109 | Hood Ajar Switch Signal (AP3 or AP8) |
| 18 | 0.35 TN | 481 | Outside Moisture Sensor Signal 1 (CE1 or HP2) |
| 19 | 0.35 D-BU | 5985 | Accessory Wakeup Serial Data |
| 20 | 0.35 D-GN/WH | 3438 | Exhaust Brake Switch Signal (K40) |
| 21 | 0.35 YE | 5199 | Run/Crank Relay Coil Control |
| 22 | -- | -- | Not Used |
| 23 | 0.35 L-GN/BK | 592 | DRL Relay Control (except MEX) |
| 24-25 | -- | -- | Not Used |

# Body Control Module (BCM) X5

**Connector Part Information**






Harness:
Instrument Panel

OEM: 15480179

Service: 88988837

Description: 25-Way F HIT Series (BN)

**Terminal Part Information**

Pins: 1, 2, 4-5

Terminal/Tray: SNAC-A061T-M2.8/20

Core/Insulation Crimp: Pins 1, 2 - C/A

Core/Insulation Crimp: Pins 4, 4, 5 - E/A

Release Tool/Test Probe: 12094429/J-35616-4A (PU)

Pins: 6, 7-11, 13-16, 18-21, 23-24

Terminal/Tray: SNAC3-A021T-M0.64/20

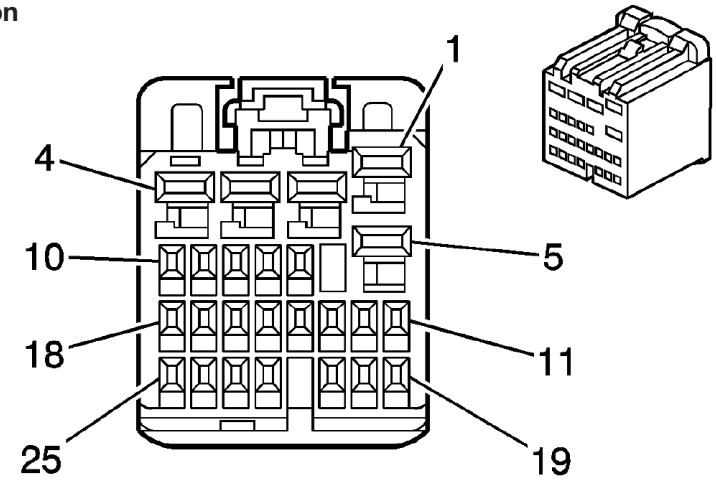
Core/Insulation Crimp: J/J

Release Tool/Test Probe: 12094429/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 1 YE | 18 | Left Rear Stop/Turn Lamp Supply Voltage |
| 2 | 1 D-GN | 19 | Right Rear Stop/Turn Lamp Supply Voltage |
| 3 | -- | -- | Not Used |
| 4 | 0.5 L-BU/WH | 1314 | Left Front Turn Signal Lamp Supply Voltage |
| 5 | 0.5 L-BU | 1320 | CHMSL Supply Voltage/Stop Lamp Supply Voltage |
| 6 | 0.35 L-BU/WH | 6311 | Cruise/ETC/TCC Brake Signal |
| 7 | -- | -- | Not Used |
| 8 | 0.5 PK | 5076 | Current Sensor Supply Voltage (10 Series except MEX) |
| 9 | 0.5 WH | 5075 | Current Sensor Signal (10 Series except MEX) |
| 10 | 0.5 BN | 5077 | Low Reference (10 Series except MEX) |
| 11 | 0.35 D-BU | 38 | Backup Lamp Relay Control |
| 12 | -- | -- | Not Used |
| 13 | 0.35 OG | 300 | Ignition 3 Voltage |
| 14 | 0.35 WH | 2283 | 12-Volt Reference (NQF, NQH or 10 Series except MEX or except 8S8) |
| 15 | 0.35 PU | 5531 | Hood Closed Switch Signal (AP3 or AP8) |
| 16 | 0.35 L-BU | 1134 | Park Brake Switch Signal (Park brake systems only) |
| 17 | -- | -- | Not Used |
| 18 | 0.35 TN | 28 | Horn Relay Control (except MEX) |
| 19 | 0.35 YE | 6812 | Out of Park Signal (YE9 or HP2) |
| 20 | 0.35 GY | 91 | Windshield Wiper Switch Signal 2 |
| 21 | 0.35 TN | 860 | Front Windshield Wiper Switch High Signal Control |
| 22 | -- | -- | Not Used |
| 23 | 0.35 PK/WH | 1970 | Headlamp Low Beam Relay Control |
| 24 | 0.35 D-BU | 45 | Park Lamp Relay Control |
| 25 | -- | -- | Not Used |

# Body Control Module (BCM) X6

**Connector Part Information**




Harness: Body

OEM: 15482793

Service: 88988842

Description: 25-Way F HIT Series (PK)

**Terminal Part Information**

Pins: 2

Terminal/Tray: SNAC-A061T-M2.8/20

Core/Insulation Crimp: C/A

Release Tool/Test Probe: 12094429/J-35616-4A (PU)

Pins: 8-10, 14-16, 18, 20, 22, 23

Terminal/Tray: SNAC3-A021T-M0.64/20

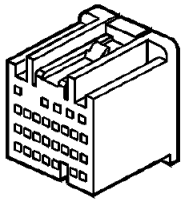
Core/Insulation Crimp: J/J

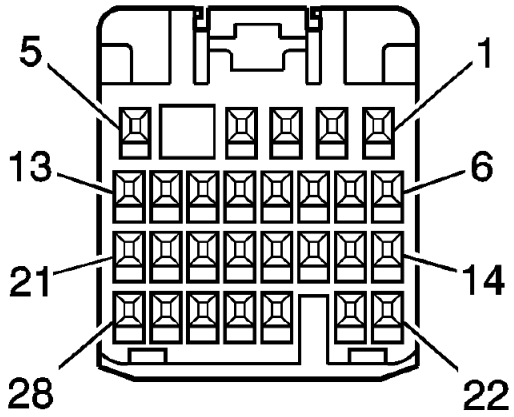
Release Tool/Test Probe: 12094429/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | -- | -- | Not Used |
| 2 | 1 WH/BK | 158 | Courtesy Lamp Supply Voltage |
| 3-7 | -- | -- | Not Used |
| 8 | 0.35 TN/WH | 746 | Right Front Door Ajar Switch Signal (except AN3 or DL3) |
| 9 | 0.35 D-BU | 245 | Passenger Door Lock Switch Unlock Signal (YE9 without AN3 or DL3 or except YE9, MEX or A52) |
| 10 | 0.35 GY/BK | 745 | Left Front Door Ajar Switch Signal (except AN3 or DL3) |
| 11-13 | -- | -- | Not Used |
| 14 | 0.35 L-GN/BK | 748 | Right Rear Door Ajar Switch Signal (Crew Cab) |
| 15 | 0.35 L-BU/BK | 747 | Left Rear Door Ajar Switch Signal (Crew Cab) |
| 16 | 0.35 OG | 5922 | Passenger Door Open Switch Signal (MEX or A52) |
| 17 | -- | -- | Not Used |
| 18 | 0.35 L-BU | 244 | Passenger Door Lock Switch Lock Signal (YE9 without AN3 or DL3 or except YE9, MEX or A52) |
| 19 | -- | -- | Not Used |
| 20 | 0.35 L-GN | 262 | Driver Door Key Switch Signal (AU3 without AN3 or DL3) |
| 21 | -- | -- | Not Used |
| 22 | 0.35 TN | 126 | Front Door Open Switch Signal (MEX or A52) |
| 23 | 0.5 YE | 5058 | Intrusion Sensor Armed Signal (SPO Alarm) |
| 24-25 | -- | -- | Not Used |

# Body Control Module (BCM) X7 (except MEX or A52)

**Connector Part Information**






Harness: Body

OEM: 15466053

Service: 88988806

Description: 28-Way F Receptacle 0.64 Series (GY)

**Terminal Part Information**

Pins: 2, 6-7, 9-12, 15, 18-19, 21, 26-28

Terminal/Tray: SNAC3-A021T-M0.64/20

Core/Insulation Crimp: J/J

Release Tool/Test Probe: 12094429/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | -- | -- | Not Used |
| 2 | 0.35 D-BU | 38 | Backup Lamp Relay Control (UVC) |
| | 0.5 L-GN | 38 | Backup Lamp Relay Control (SPO Rearview Camera) |
| 3-5 | -- | -- | Not Used |
| 6 | 0.35 L-BU | 5921 | Driver Door Unlock Relay Control (except AN3 or DL3) |
| 7 | 0.35 L-BU | 195 | Door Lock Control |
| 8 | -- | -- | Not Used |
| 9 | 0.35 WH | 194 | Door Unlock Control |
| 10 | 0.35 L-GN | 2081 | Exhaust Brake Switch Control (K40) |
| 11 | 0.35 OG/BK | 781 | Driver Door Lock Switch Unlock Signal (YE9 without AN3 or DL3, or except YE9) |
| 12 | 0.35 PK/BK | 780 | Driver Door Lock Switch Lock Signal (YE9 without AN3 or DL3, or except YE9) |
| 13-14 | -- | -- | Not Used |
| 15 | 0.5 PU | 5059 | Intrusion Sensor Alarm ON Signal (SPO Alarm) |
| 16-17 | -- | -- | Not Used |
| 18 | 0.35 L-GN | 170 | Power Window Master Switch Right Rear Up Signal (AN3 or DL3 with Crew Cab and with A31 or HP2, or Extended Cab with ABV) |

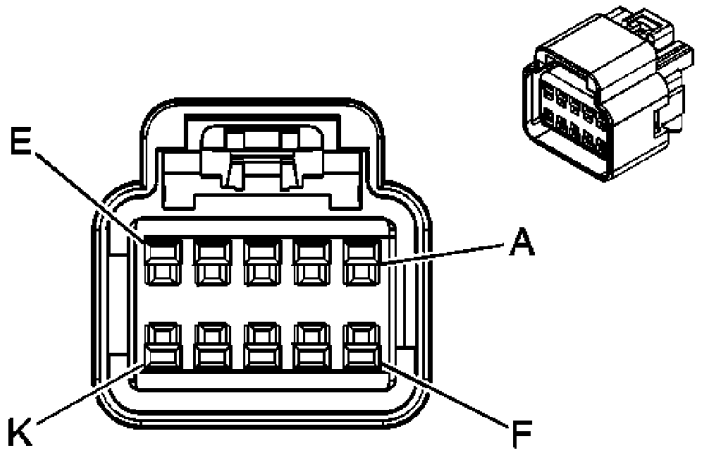
*(continued on next page)*

## Body Control Module (BCM) X7 (except MEX or A52) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 19 | 0.35 PU | 169 | Power Window Master Switch Left Rear Down Signal (AN3 or DL3 with Crew Cab and with A31 or HP2, or Extended Cab with ABV) |
| 20 | -- | -- | Not Used |
| 21 | 0.35 D-BU | 1307 | Power Window Master Switch Lockout Signal (AN3 or DL3 with Crew Cab and with A31 or HP2, or Extended Cab with ABV) |
| 22-25 | -- | -- | Not Used |
| 26 | 0.35 PU | 171 | Power Window Master Switch Right Rear Down Signal (AN3 or DL3 with Crew Cab and with A31 or HP2, or Extended Cab with ABV) |
| 27 | 0.35 L-BU/WH | 280 | Power Window Master Switch Lockout Right Rear Signal (AN3 or DL3 with Crew Cab and with A31 or HP2, or Extended Cab with ABV) |
| 28 | 0.35 D-GN | 168 | Power Window Master Switch Left Rear Up Signal (AN3 or DL3 with Crew Cab and with A31 or HP2, or Extended Cab with ABV) |

# X500 Left Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3)

**Connector Part Information**




Harness: Left Front Door

OEM: 15332153

Service: Service by Harness - See Part Catalog

Description: 10-Way F GT 150 (BK)

**Terminal Part Information**

Terminal/Tray: 12191812/19

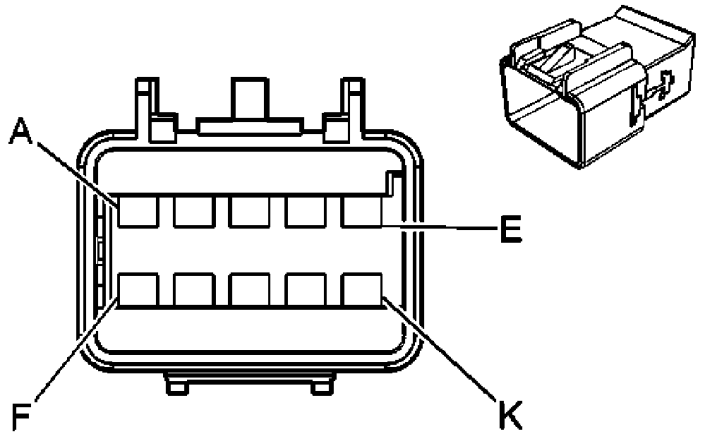
Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 PU/WH | 889 | Passenger Mirror Motor Down Control (DL8 or DPN) |
| B | 0.5 TN/WH | 330 | Passenger Mirror Motor Supply Voltage (DL8 or DPN) |

*(continued on next page)*

**Connector Part Information**




Harness: Body

OEM: 15332158

Service: 88953270

Description: 10-Way M GT 150 (BK)

**Terminal Part Information**

Terminal/Tray: 15304702/19

Core/Insulation Crimp: A-E, K E/4

Core/Insulation Crimp: F, G, H, J E/C

Release Tool/Test Probe: 15315247/J-35616-3 (GY)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 PU/WH | 889 | Passenger Mirror Motor Down Control (DL8 or DPN) |
| B | 0.5 TN/WH | 330 | Passenger Mirror Motor Supply Voltage (DL8 or DPN) |

*(continued on next page)*

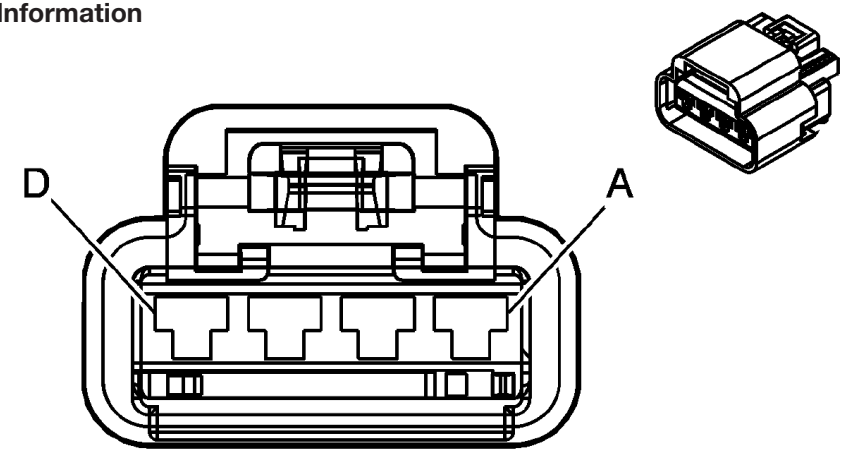
## X500 Left Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 PU/WH | 889 | Passenger Mirror Motor Down Control (DL8 or DPN) |
| B | 0.5 TN/WH | 330 | Passenger Mirror Motor Supply Voltage (DL8 or DPN) |
| C | 0.5 OG/WH | 881 | Passenger Mirror Motor Right Control (DL8 or DPN) |
| D | 0.5 WH | 2132 | Side Impact Sensing Module - Signal (ASF) |
| E | 0.5 PU/WH | 6628 | Low Reference (ASF) |
| F | 0.35 PU | 171 | Power Window Master Switch Right Rear Down Signal (A31 or HP2) |
| G | 0.35 L-GN | 170 | Power Window Master Switch Right Rear Up Signal (A31 or HP2) |
| H | 0.35 YE | 43 | Accessory Voltage (A31) |
| J | 0.35 TN | 167 | Power Window Master Switch Right Front Down Signal (A31 or HP2) |
| K | 0.5 OG | 2267 | Mirror Heating Element Supply Voltage (DL8 or DPN) |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 PU/WH | 889 | Passenger Mirror Motor Down Control (DL8 or DPN) |
| B | 0.5 TN/WH | 330 | Passenger Mirror Motor Supply Voltage (DL8 or DPN) |
| C | 0.5 OG/WH | 881 | Passenger Mirror Motor Right Control (DL8 or DPN) |
| D | 0.5 WH | 2132 | Side Impact Sensing Module - Signal (ASF) |
| E | 0.5 PU/WH | 6628 | Low Reference (ASF) |
| F | 0.35 PU | 171 | Power Window Master Switch Right Rear Down Signal (Crew Cab with A31, HP2 or Extended Cab with ABV) |
| G | 0.35 L-GN | 170 | Power Window Master Switch Right Rear Up Signal (Crew Cab with A31, HP2 or Extended Cab with ABV) |
| H | 0.35 YE | 43 | Accessory Voltage |
| J | 0.35 TN | 167 | Power Window Master Switch Right Front Down Signal (A31 or HP2) |
| K | 0.5 OG | 2267 | Mirror Heating Element Supply Voltage (DL8 or DPN) |

# X502 Left Front Door Harness to Body Harness (ASF with AN3 or DL3, and except YE9)

**Connector Part Information**




Harness: Left Front Door

OEM: 15326886

Service: 88988300

Description: 4-Way F GT 280 Series (BK)

**Terminal Part Information**

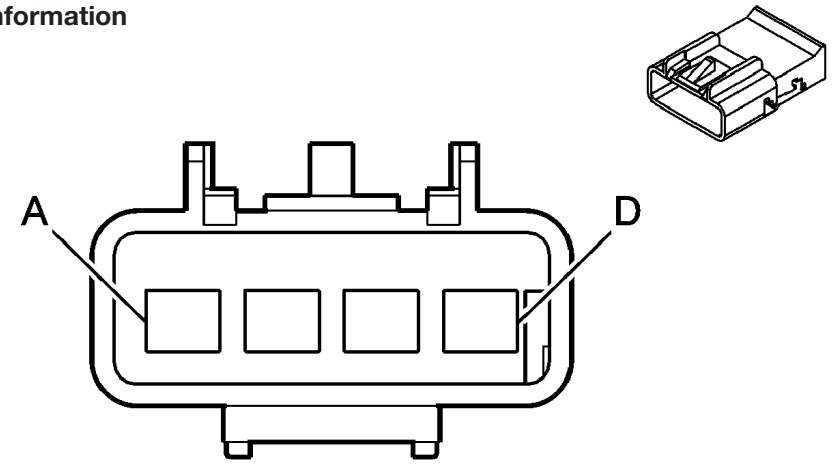
Terminal/Tray: 15304711/8

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 PU/WH | 6628 | Low Reference |
| B | 0.5 WH | 2132 | Left Front Side Impact Sensing Module Signal |
| C-D | -- | -- | Not Used |

**Connector Part Information**




Harness: Body

OEM: 15326890

Service: 88953361

Description: 4-Way M GT 280 Series (BK)

**Terminal Part Information**

Terminal/Tray: 15304722/8

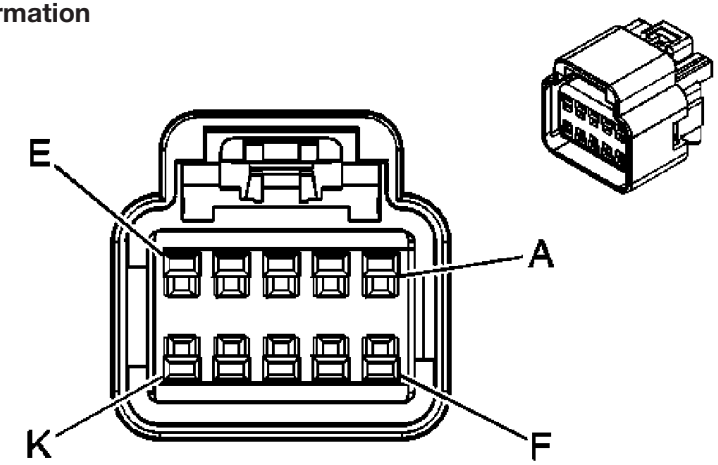
Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-5 (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 PU/WH | 6628 | Low Reference |
| B | 0.5 WH | 2132 | Left Front Side Impact Sensing Module Signal |
| C-D | -- | -- | Not Used |

# X501 Left Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3)

**Connector Part Information**




Harness: Left Front Door

OEM: 15332153

Service: Service by Harness - See Part Catalog

Description: 10-Way F GT 150 (BK)

**Terminal Part Information**

Pins: F, G

Terminal/Tray: 12191812/19

Core/Insulation Crimp: C/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: A, B, C, D, E, H, J, K

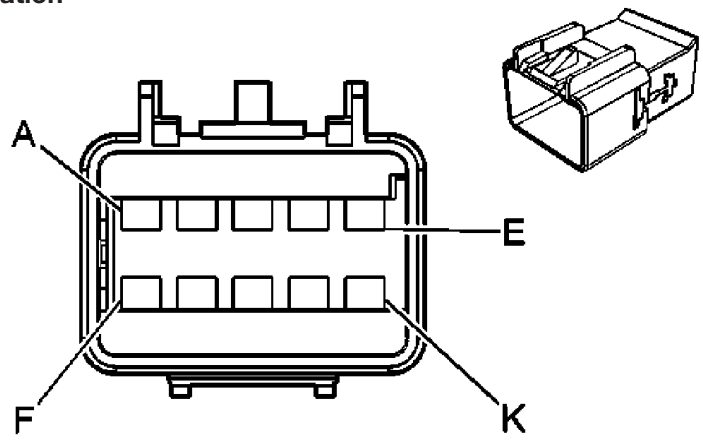
Terminal/Tray: 15304702/19

Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-3 (GY)

*(continued on next page)*

**Connector Part Information**




Harness: Body

OEM: 15332158

Service: 88953270

Description: 10-Way M GT 150 (BK)

**Terminal Part Information**

Pins: F, G

Terminal/Tray: 15304702/19

Core/Insulation Crimp: 2/4

Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: A, B, C, D, E, H, J, K

Terminal/Tray: 15304702/19

Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-3 (GY)

*(continued on next page)*

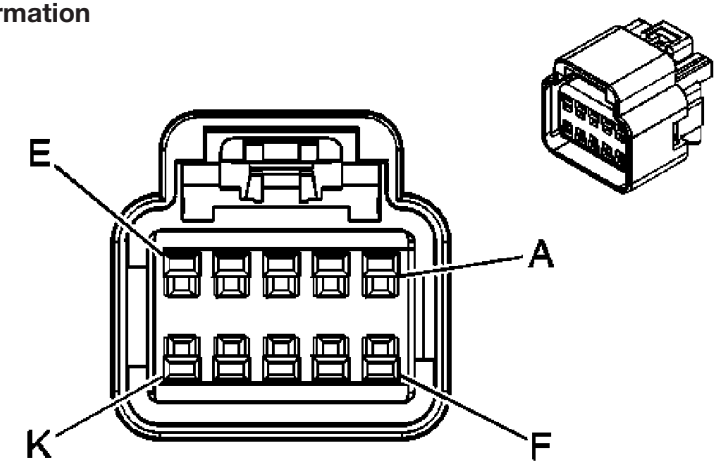
## X501 Left Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.35 L-BU | 166 | Power Window Master Switch Right Front Up Signal (A31 or HP2) |
| B | 0.35 PU | 169 | Power Window Master Switch Left Rear Down Signal (Crew Cab with A31, HP2 or Extended Cab with ABV) |
| C | 0.35 D-GN | 168 | Power Window Master Switch Left Rear Up Signal (Crew Cab with A31, HP2 or Extended Cab with ABV) |
| D | 0.35 D-BU | 1307 | Power Window Master Switch Lockout Signal (Crew Cab with A31, HP2 or Extended Cab with ABV) |
| E | 0.35 L-BU/WH | 280 | Power Window Master Switch Lockout Right Rear Signal (Crew Cab with A31, HP2 or Extended Cab with ABV) |
| F | 0.8 GY | 295 | Door Lock Actuator Lock Control (AU3 or HP2) |
| G | 0.8 TN | 694 | Driver Door Lock Actuator Unlock Control (AU3 or HP2) |
| H | 0.35 OG/BK | 781 | Driver Door Lock Switch Unlock Signal (AU3 or HP2) |
| J | 0.35 PK/BK | 780 | Driver Door Lock Switch Lock Signal (AU3) |
| K | 0.35 L-GN | 262 | Driver Door Key Switch Signal (AU3) |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.35 L-BU | 166 | Power Window Master Switch Right Front Up Signal (A31 or HP2) |
| B | 0.35 PU | 169 | Power Window Master Switch Left Rear Down Signal (Crew Cab with A31, HP2 or Extended Cab with ABV) |
| C | 0.35 D-GN | 168 | Power Window Master Switch Left Rear Up Signal (Crew Cab with A31, HP2 or Extended Cab with ABV) |
| D | 0.35 D-BU | 1307 | Power Window Master Switch Lockout Signal (Crew Cab with A31, HP2 or Extended Cab with ABV) |
| E | 0.35 L-BU/WH | 280 | Power Window Master Switch Lockout Right Rear Signal (Crew Cab with A31, HP2 or Extended Cab with ABV) |
| F | 0.8 GY | 295 | Door Lock Actuator Lock Control (AU3 or HP2) |
| G | 0.8 TN | 694 | Driver Door Lock Actuator Unlock Control (AU3 or HP2) |
| H | 0.35 OG/BK | 781 | Driver Door Lock Switch Unlock Signal (AU3 or HP2) |
| J | 0.35 PK/BK | 780 | Driver Door Lock Switch Lock Signal |
| K | 0.35 L-GN | 262 | Driver Door Key Switch Signal |

# X600 Right Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3)

**Connector Part Information**




Harness: Right Front Door

OEM: 15332153

Service: 88986440

Description: 10-Way F GT 150 (BK)

**Terminal Part Information**

Pins: A, C-K

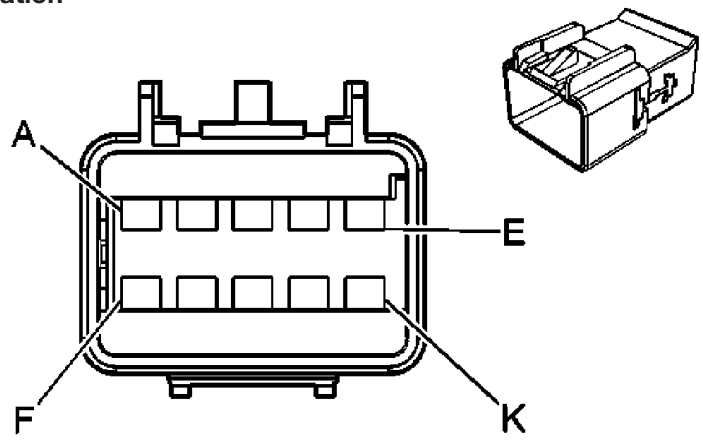
Terminal/Tray: 12191812/19

Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

*(continued on next page)*

**Connector Part Information**




Harness: Body

OEM: 15332158

Service: 88953270

Description: 10-Way M GT 150 (BK)

**Terminal Part Information**

Pins: A, D-F

Terminal/Tray: 15304702/19

Core/Insulation Crimp: E/4

Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: C, G-K

Terminal/Tray: 15304702/19

Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-3 (GY)

*(continued on next page)*

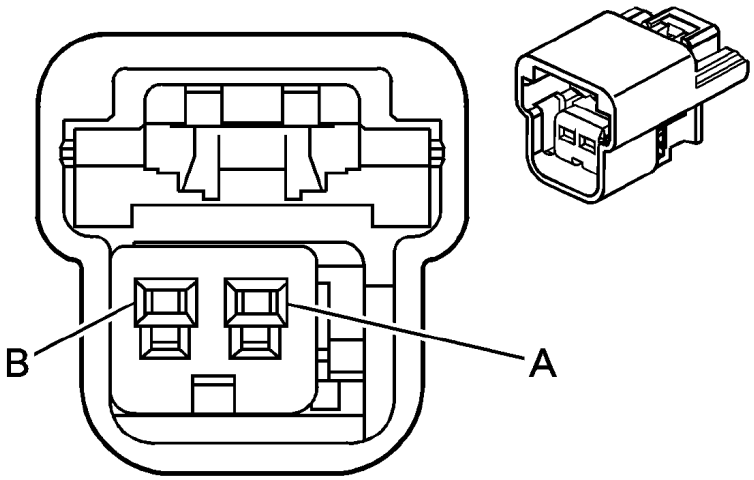
## X600 Right Front Door Harness to Body Harness (YE9 or HP2, without AN3 or DL3) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 OG | 2267 | Mirror Heating Element Supply Voltage (DL8 or DPN) |
| B | -- | -- | Not Used |
| C | 0.35 YE | 43 | Accessory Voltage (A31 or HP2) |
| D | 0.5 PU/WH | 889 | Passenger Mirror Motor Down Control (DL8 or DPN) |
| E | 0.5 TN/WH | 330 | Passenger Mirror Motor Supply Voltage (DL8 or DPN) |
| F | 0.5 OG/WH | 881 | Passenger Mirror Motor Right Control (DL8 or DPN) |
| G | 0.35 TN | 167 | Power Window Master Switch Right Front Down Signal (A31 or HP2) |
| H | 0.35 L-BU | 166 | Power Window Master Switch Right Front Up Signal (A31 or HP2) |
| J | 0.35 L-BU | 244 | Passenger Door Lock Switch Lock Signal (A31 or HP2) |
| K | 0.35 D-BU | 245 | Passenger Door Lock Switch Unlock Signal (A31 or HP2) |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 OG | 2267 | Mirror Heating Element Supply Voltage (DL8 or DPN) |
| B | -- | -- | Not Used |
| C | 0.35 YE | 43 | Accessory Voltage (A31 or HP2) |
| D | 0.5 PU/WH | 889 | Passenger Mirror Motor Down Control (DL8 or DPN) |
| E | 0.5 TN/WH | 330 | Passenger Mirror Motor Supply Voltage (DL8 or DPN) |
| F | 0.5 OG/WH | 881 | Passenger Mirror Motor Right Control (DL8 or DPN) |
| G | 0.35 TN | 167 | Power Window Master Switch Right Front Down Signal (A31 or HP2) |
| H | 0.35 L-BU | 166 | Power Window Master Switch Right Front Up Signal (A31 or HP2) |
| J | 0.35 L-BU | 244 | Passenger Door Lock Switch Lock Signal (A31 or HP2) |
| K | 0.35 D-BU | 245 | Passenger Door Lock Switch Unlock Signal (A31 or HP2) |

# X601 Right Front Door Harness to Body Harness (ASF)

**Connector Part Information**




Harness: Right Front Door

OEM: 15332129

Service: 15306425

Description: 2-Way F GT 150 (BK)

**Terminal Part Information**

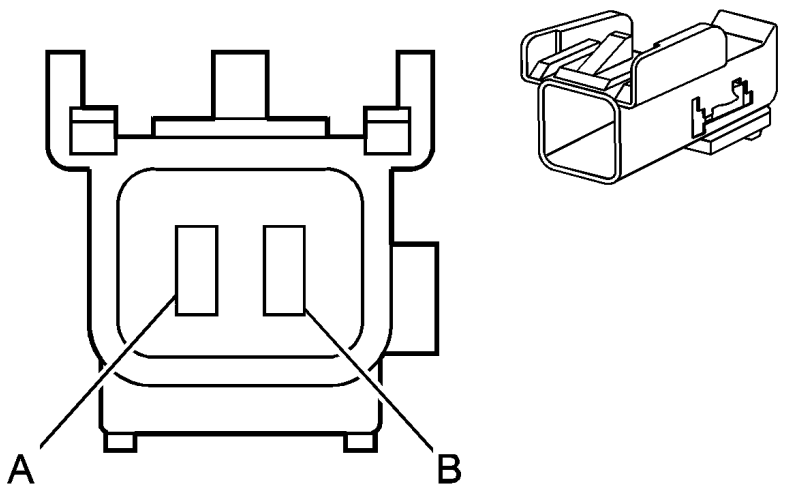
Terminal/Tray: 12191812/19

Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 WH/WH | 6629 | Low Reference |
| B | 0.5 D-GN | 2134 | Right Front Side Impact Sensing Module Signal |

**Connector Part Information**




Harness: Body

OEM: 15332130

Service: 88986459

Description: 2-Way M GT 150 (BK)

**Terminal Part Information**

Terminal/Tray: 15304702/19

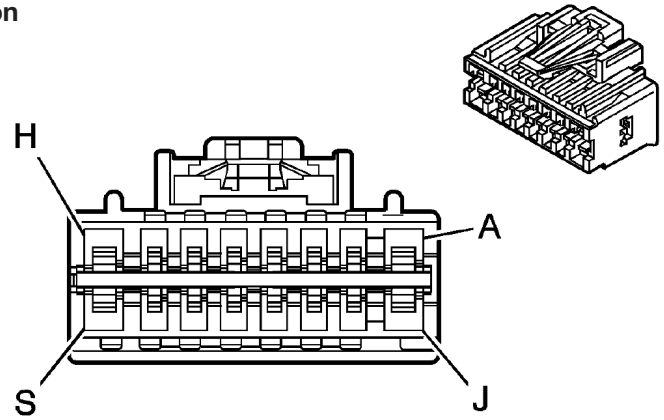
Core/Insulation Crimp: E/4

Release Tool/Test Probe: 15315247/J-35616-3 (GY)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 WH/BK | 6629 | Low Reference |
| B | 0.5 D-GN | 2134 | Right Front Side Impact Sensing Module Signal |

# X700 Body Harness to Left Rear Door Harness (Crew Cab)

**Connector Part Information**




Harness: Body

OEM: 13539998

Service: 19180283

Description: 16-Way F GT 150, 280 Series (BK)

**Terminal Part Information**

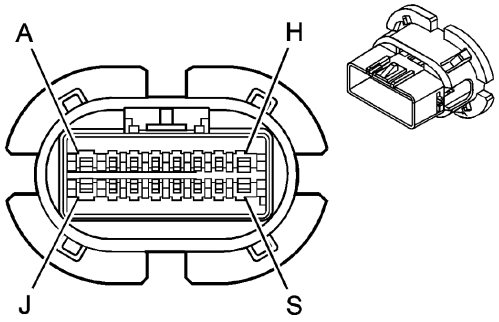
Pins: A, H
Terminal/Tray: 15304793/19
Core/Insulation Crimp: F/D
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B-G, M, R
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: K-P
Terminal/Tray: 12191812/19
Core/Insulation Crimp: C/A
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

*(continued on next page)*

**Connector Part Information**




Harness: Left Rear Door

OEM: 13579161

Service: Service by Harness - See Part Catalog

Description: 16-Way M GT 150, 280 Series (GY)

**Terminal Part Information**

Pins: A, H
Terminal/Tray: 15304724/8
Core/Insulation Crimp: A/D
Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: B-F, M
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: G, R
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: K, L (UQA)
Pins: N-P
Terminal/Tray: 15304702/19
Core/Insulation Crimp: 2/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: K, L (UQ3 or UQ5)
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

*(continued on next page)*

## X700 Body Harness to Left Rear Door Harness (Crew Cab) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 3 BK | 1150 | Ground |
| B | 0.35 PU | 169 | Power Window Master Switch Left Rear Down Signal |
| C | 0.35 D-BU | 1307 | Power Window Master Switch Lockout Signal |
| D | 0.35 D-GN | 168 | Power Window Master Switch Left Rear Up Signal |
| E | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control (A31) |
| F | 0.35 L-BU/BK | 747 | Left Rear Door Ajar Switch Signal |
| G | 0.5 L-GN/BK | 6623 | Low Reference (ASF) |
| H | 3 RD/WH | 1240 | Battery Positive Voltage |
| J | -- | -- | Not Used |
| K | 0.8 YE | 116 | Left Rear Speaker Output (-) |
| L | 0.8 BN | 199 | Left Rear Speaker Output (+) |
| M | 0.5 BK | 1150 | Ground |
| N | 0.8 TN | 294 | Door Lock Actuator Unlock Control |
| P | 0.8 GY | 295 | Door Lock Actuator Lock Control |
| R | 0.5 L-BU | 6622 | Left Rear Side Impact Sensing Module Signal (ASF) |
| S | -- | -- | Not Used |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 3 BK | 1150 | Ground |
| B | 0.35 PU | 169 | Power Window Master Switch Left Rear Down Signal |
| C | 0.35 D-BU | 1307 | Power Window Master Switch Lockout Signal |
| D | 0.35 D-GN | 168 | Power Window Master Switch Left Rear Up Signal |
| E | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control (A31 with UQA) |
| F | 0.35 L-BU/BK | 747 | Left Rear Door Ajar Switch Signal |
| G | 0.5 L-GN/BK | 6623 | Low Reference (ASF) |
| H | 3 RD/WH | 1240 | Battery Positive Voltage |
| J | -- | -- | Not Used |
| K | 0.8 YE | 116 | Left Rear Speaker Output (-) (UQA) |
| | 0.5 YE | 116 | Left Rear Speaker Output (-) (UQ3 or UQ5) |
| L | 0.8 BN | 199 | Left Rear Speaker Output (+) (UQA) |
| | 0.5 BN | 199 | Left Rear Speaker Output (+) (UQ3 or UQ5) |
| M | 0.35 BK | 1150 | Ground |
| N | 0.8 TN | 294 | Door Lock Actuator Unlock Control |
| P | 0.8 GY | 295 | Door Lock Actuator Lock Control |
| R | 0.5 L-BU | 6622 | Left Rear Side Impact Sensing Module Signal (ASF) |
| S | -- | -- | Not Used |

# X700 Left Rear Door Harness to Body Harness (Extended Cab)

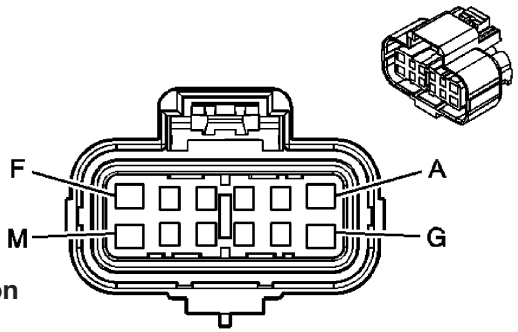
**Connector Part Information**

Harness: Left Rear Door

OEM: 15336205

Service: 88986267

Description: 12-Way F GT Mixed (BK)




**Terminal Part Information**

Pins: A, F
Terminal/Tray: 15304713/19
Core/Insulation Crimp: F/D
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B-E, H
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: G
Terminal/Tray: 15304711/8
Core/Insulation Crimp: E/A
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: K, L (UQA)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: C/A
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: K, L (UQ3 or UQ5)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

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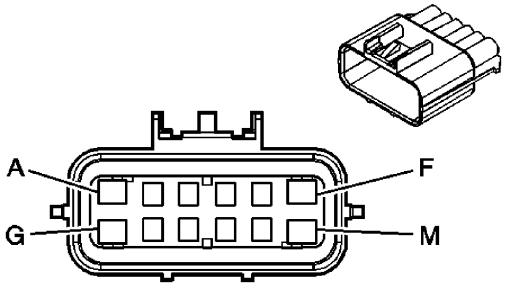
**Connector Part Information**

Harness: Body

OEM: 15336209

Service: 88986259

Description: 12-Way M GT Mixed (BK)




**Terminal Part Information**

Pins: A, F
Terminal/Tray: 15304724/8
Core/Insulation Crimp: C/D
Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: B-E
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: F-H
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: G
Terminal/Tray: 15304722/8
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: K, L
Terminal/Tray: 15304702/19
Core/Insulation Crimp: 2/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

*(continued on next page)*

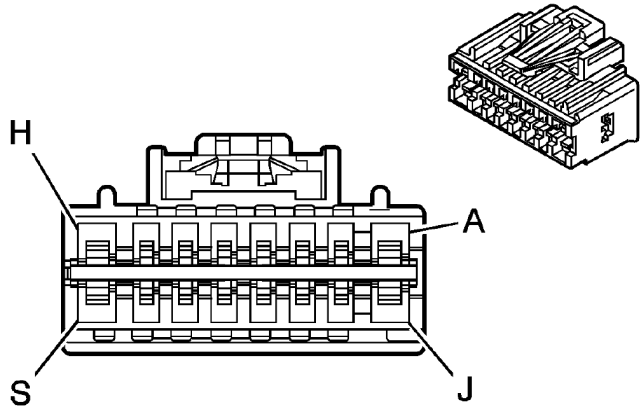
## X700 Left Rear Door Harness to Body Harness (Extended Cab) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 3 BK | 1150 | Ground |
| B | 0.35 PU | 169 | Power Window Master Switch Left Rear Down Signal |
| C | 0.35 D-BU | 1307 | Power Window Master Switch Lockout Signal |
| D | 0.35 D-GN | 168 | Power Window Master Switch Left Rear Up Signal |
| E | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control (ABV with UQA) |
| F | 3 RD/WH | 1240 | Battery Positive Voltage |
| G | 0.5 L-GN/BK | 6623 | Low Reference (ASF) |
| H | 0.5 L-BU | 6622 | Left Rear Side Impact Sensing Module Signal (ASF) |
| J | -- | -- | Not Used |
| K | 0.8 BN | 199 | Left Rear Speaker Output (+) (UQA) |
| | 0.5 BN | 199 | Left Rear Speaker Output (+) (UQ3 or UQ5) |
| L | 0.8 YE | 116 | Left Rear Speaker Output (-) (UQA) |
| | 0.5 YE | 116 | Left Rear Speaker Output (-) (UQ3 or UQ5) |
| M | -- | -- | Not Used |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 3 BK | 1150 | Ground |
| B | 0.35 PU | 169 | Power Window Master Switch Left Rear Down Signal |
| C | 0.35 D-BU | 1307 | Power Window Master Switch Lockout Signal |
| D | 0.35 D-GN | 168 | Power Window Master Switch Left Rear Up Signal |
| E | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control (ABV) |
| F | 2 RD/WH | 1240 | Battery Positive Voltage |
| G | 0.5 L-GN/BK | 6623 | Low Reference (ASF) |
| H | 0.5 L-BU | 6622 | Left Rear Side Impact Sensing Module Signal (ASF) |
| J | -- | -- | Not Used |
| K | 0.8 BN | 199 | Left Rear Speaker Output (+) |
| L | 0.8 YE | 116 | Left Rear Speaker Output (-) |
| M | -- | -- | Not Used |

# X800 Body Harness to Right Rear Door Harness (Crew Cab)

**Connector Part Information**




Harness: Body

OEM: 13539998

Service: 19180283

Description: 16-Way F GT 150, 280 Series (BK)

**Terminal Part Information**

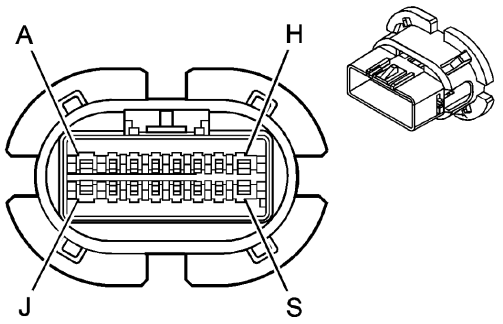
Pins: A, H
Terminal/Tray: 15304713/19
Core/Insulation Crimp: F/D
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B-G, M, R
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: K-P
Terminal/Tray: 12191812/19
Core/Insulation Crimp: C/A
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

*(continued on next page)*

**Connector Part Information**




Harness:
Right Rear Door

OEM: 13579161

Service: Service by Harness - See Part Catalog

Description: 16-Way M GT 150, 280 Series (GY)

**Terminal Part Information**

Pins: A, H
Terminal/Tray: 15304724/8
Core/Insulation Crimp: A/D
Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: B-E, M
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: G, R
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: K, L (UQA)
Pins: N-P
Terminal/Tray: 15304702/19
Core/Insulation Crimp: 2/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: K, L (UQ3 or UQ5)
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

*(continued on next page)*

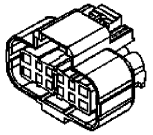
## X800 Body Harness to Right Rear Door Harness (Crew Cab) (cont'd)

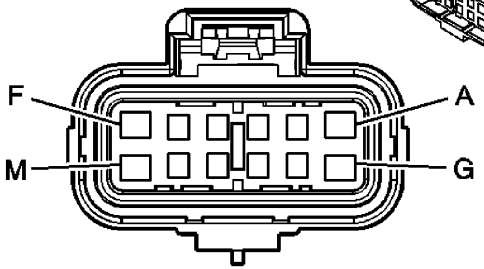
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 3 BK | 1250 | Ground |
| B | 0.35 PU | 171 | Power Window Master Switch Right Rear Down Signal |
| C | 0.35 L-BU/WH | 280 | Power Window Master Switch Lockout Right Rear Signal |
| D | 0.35 L-GN | 170 | Power Window Master Switch Right Rear Up Signal |
| E | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control (A31) |
| F | 0.35 L-GN/BK | 748 | Right Rear Door Ajar Switch Signal |
| G | 0.5 PK/BK | 6627 | Low Reference (ASF) |
| H | 3 RD/WH | 1340 | Battery Positive Voltage |
| J | -- | -- | Not Used |
| K | 0.8 L-BU | 115 | Right Rear Speaker Output (-) |
| L | 0.8 D-BU | 46 | Right Rear Speaker Output (+) |
| M | 0.5 BK | 1250 | Ground |
| N | 0.8 TN | 294 | Door Lock Actuator Unlock Control |
| P | 0.8 GY | 295 | Door Lock Actuator Lock Control |
| R | 0.5 L-BU/WH | 6626 | Right Rear Side Impact Sensing Module Signal (ASF) |
| S | -- | -- | Not Used |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 3 BK | 1250 | Ground |
| B | 0.35 PU | 171 | Power Window Master Switch Right Rear Down Signal |
| C | 0.35 L-BU/WH | 280 | Power Window Master Switch Lockout Right Rear Signal |
| D | 0.35 L-GN | 170 | Power Window Master Switch Right Rear Up Signal |
| E | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control (A31 with UQA) |
| F | 0.35 L-GN/BK | 748 | Right Rear Door Ajar Switch Signal |
| G | 0.5 PK/BK | 6627 | Low Reference (ASF) |
| H | 3 RD/WH | 1340 | Battery Positive Voltage |
| J | -- | -- | Not Used |
| K | 0.8 L-BU | 115 | Right Rear Speaker Output (-) (UQA) |
| | 0.5 L-BU | 115 | Right Rear Speaker Output (-) (UQ3 or UQ5) |
| L | 0.8 D-BU | 46 | Right Rear Speaker Output (+) (UQA) |
| | 0.5 D-BU | 46 | Right Rear Speaker Output (+) (UQ3 or UQ5) |
| M | 0.35 BK | 1250 | Ground |
| N | 0.8 TN | 294 | Door Lock Actuator Unlock Control |
| P | 0.8 GY | 295 | Door Lock Actuator Lock Control |
| R | 0.5 L-BU/WH | 6626 | Right Rear Side Impact Sensing Module Signal (ASF) |
| S | -- | -- | Not Used |

# X800 Right Rear Door Harness to Body Harness (Extended Cab)

**Connector Part Information**






Harness:
Right Rear Door

OEM: 15336205

Service: 88986267

Description: 12-Way F GT Mixed (BK)

**Terminal Part Information**

Pins: A, F
Terminal/Tray: 15304713/19
Core/Insulation Crimp: F/D
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: B-E, H
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

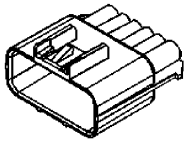
Pins: G
Terminal/Tray: 15304711/8
Core/Insulation Crimp: E/A
Release Tool/Test Probe: 15315247/J-35616-4A (PU)

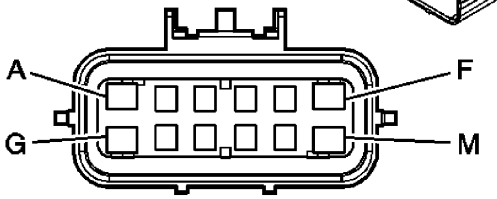
Pins: K, L (UQA)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: C/A
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: K, L (UQ3 or UQ5)
Terminal/Tray: 12191812/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-2A (GY)

*(continued on next page)*

**Connector Part Information**






Harness: Body

OEM: 15336209

Service: 88986259

Description: 12-Way M GT Mixed (BK)

**Terminal Part Information**

Pins: A, F
Terminal/Tray: 15304724/8
Core/Insulation Crimp: C/D
Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: B-E
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: F-H
Terminal/Tray: 15304702/19
Core/Insulation Crimp: E/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: G
Terminal/Tray: 15304722/8
Core/Insulation Crimp: E/C
Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: K, L
Terminal/Tray: 15304702/19
Core/Insulation Crimp: 2/4
Release Tool/Test Probe: 15315247/J-35616-3 (GY)

*(continued on next page)*

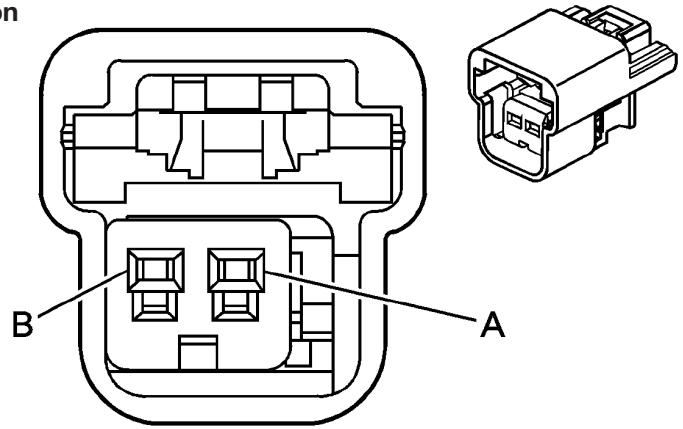
## X800 Right Rear Door Harness to Body Harness (Extended Cab) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 3 BK | 1250 | Ground |
| B | 0.35 PU | 171 | Power Window Master Switch Right Rear Down Signal |
| C | 0.35 L-BU/WH | 280 | Power Window Master Switch Lockout Right Rear Signal |
| D | 0.35 L-GN | 170 | Power Window Master Switch Right Rear Up Signal |
| E | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control (ABV with UQA) |
| F | 3 RD/WH | 1340 | Battery Positive Voltage |
| G | 0.5 PK/BK | 6627 | Low Reference (ASF) |
| H | 0.5 L-BU/WH | 6626 | Right Rear Side Impact Sensing Module Signal (ASF) |
| J | -- | -- | Not Used |
| K | 0.8 D-BU | 46 | Right Rear Speaker Output (+) (UQA) |
| | 0.5 D-BU | 46 | Right Rear Speaker Output (+) (UQ3 or UQ5) |
| L | 0.8 L-BU | 115 | Right Rear Speaker Output (-) (UQA) |
| | 0.5 L-BU | 115 | Right Rear Speaker Output (-) (UQ3 or UQ5) |
| M | -- | -- | Not Used |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 3 BK | 1250 | Ground |
| B | 0.35 PU | 171 | Power Window Master Switch Right Rear Down Signal |
| C | 0.35 L-BU/WH | 280 | Power Window Master Switch Lockout Right Rear Signal |
| D | 0.35 L-GN | 170 | Power Window Master Switch Right Rear Up Signal |
| E | 0.5 BN/WH | 230 | Instrument Panel Lamps Dimming Control (ABV) |
| F | 2 RD/WH | 1340 | Battery Positive Voltage |
| G | 0.5 PK/BK | 6627 | Low Reference (ASF) |
| H | 0.5 L-BU/WH | 6626 | Right Rear Side Impact Sensing Module Signal (ASF) |
| J | -- | -- | Not Used |
| K | 0.8 D-BU | 46 | Right Rear Speaker Output (+) |
| L | 0.8 L-BU | 115 | Right Rear Speaker Output (-) |
| M | -- | -- | Not Used |

# X500 Driver Door Harness to Body Harness (ASF)

**Connector Part Information**




Harness Type: Driver Door

OEM Connector: 13668003

Service Connector: 15306425

Description: 2-Way F GT 150 Series (BK)

**Terminal Part Information**

Terminated Lead: 13575492

Release Tool: J-38125-29

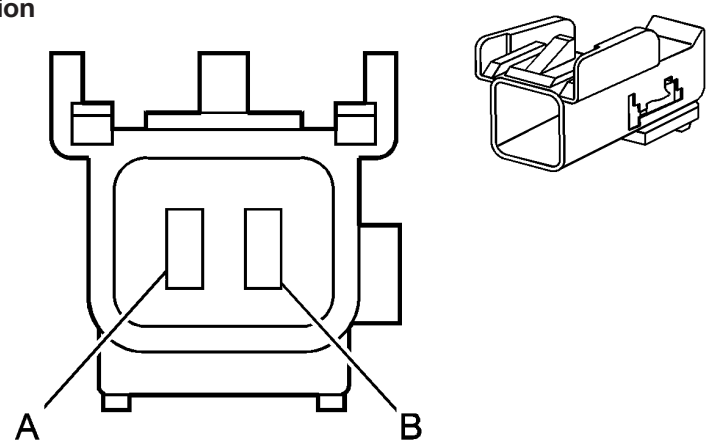
Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 13673609/Not Available

Core/Insulation Crimp: Not Available

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 PU/WH | 6628 | Low Reference |
| B | 0.5 WH | 2132 | Side Impact Sensing Module - Left - Signal |

**Connector Part Information**




Harness Type: Body

OEM Connector: 15332130

Service Connector: 88986459

Description: 2-Way M GT 150 Series (BK)

**Terminal Part Information**

Terminated Lead: 13575502

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-3 (GY)

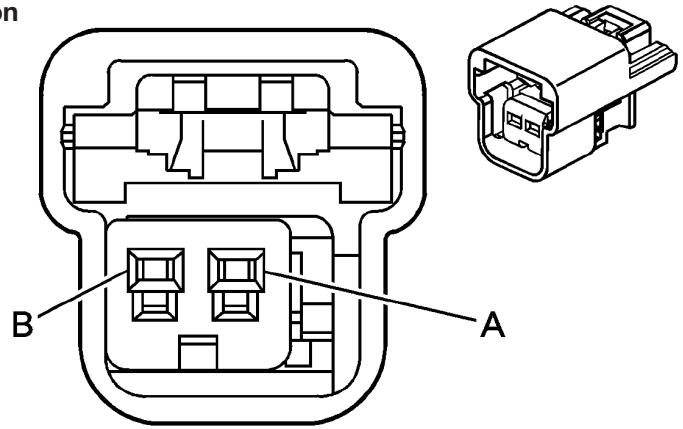
Terminal/Tray: 15304702/19

Core/Insulation Crimp: E/4

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 PU/WH | 6628 | Low Reference |
| B | 0.5 WH | 2132 | Side Impact Sensing Module - Left - Signal |

# X600 Passenger Door Harness to Body Harness (ASF)

**Connector Part Information**




Harness Type: Passenger Door

OEM Connector: 13668003

Service Connector: 15306425

Description: 2-Way F GT 150 Series (BK)

**Terminal Part Information**

Terminated Lead: 13575492

Release Tool: J-38125-29

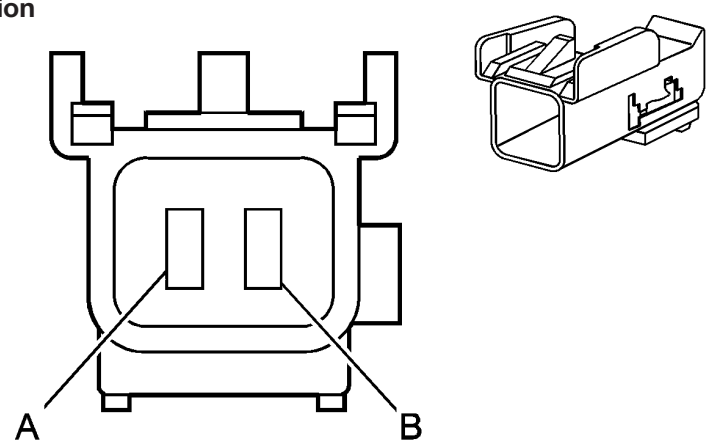
Diagnostic Test Probe: J-35616-2A (GY)

Terminal/Tray: 13673609/Not Available

Core/Insulation Crimp: Not Available

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 WH/BK | 6629 | Low Reference |
| B | 0.5 D-GN | 2134 | Side Impact Sensing Module - Right - Signal |

**Connector Part Information**




Harness Type: Body

OEM Connector: 15332130

Service Connector: 88986459

Description: 2-Way M GT 150 Series (BK)

**Terminal Part Information**

Terminated Lead: 13575502

Release Tool: J-38125-553

Diagnostic Test Probe: J-35616-3 (GY)

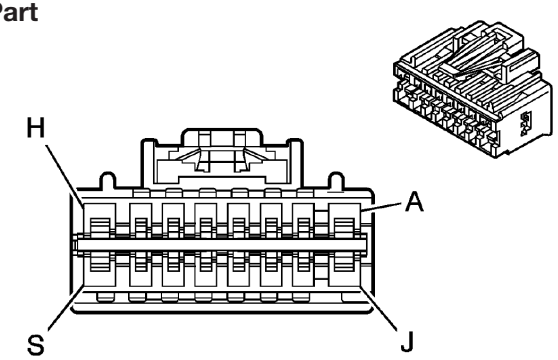
Terminal/Tray: 15304702/19

Core/Insulation Crimp: E/4

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 0.5 WH/BK | 6629 | Low Reference |
| B | 0.5 D-GN | 2134 | Side Impact Sensing Module - Right - Signal |

# X700 Body Harness to Left Rear Door Harness

**Connector Part Information**




Harness Type: Body

OEM Connector: 13539998

Service Connector: 19149306

Description: 16-Way F GT 150 280 Series (BK)

**Terminal Part Information**

Pins: B-G, K-R

Terminal/Tray: 12191812/19

Core/Insulation Crimp: Pins: B-G, M, R: E/C

Core/Insulation Crimp: Pins: K-L, N, P: C/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: A, H

Terminal/Tray: 15304713/19

Core/Insulation Crimp: 4/4

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: S

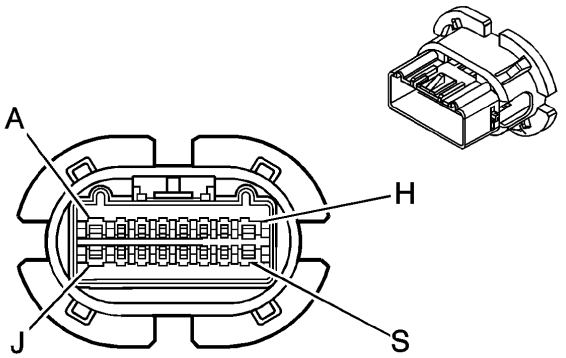
Terminal/Tray: 15304711/8

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

*(continued on next page)*

**Connector Part Information**




Harness Type: Left Rear Door

OEM Connector: 13540002

Service Connector: 19115742

Description: 16-Way M GT 150 280 Series (WH)

**Terminal Part Information**

Pins: B-G, K-R

Terminal/Tray: 15304702/19

Core/Insulation Crimp: Pins: B-G, K-L (UQ3), M, R: E/4

Core/Insulation Crimp: Pins: K-L (UQA/UQS), N, P: 2/4

Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: A, H

Terminal/Tray: 15304724/8

Core/Insulation Crimp: A/D

Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: S

Terminal/Tray: 15304722/8

Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-5 (PU)

*(continued on next page)*

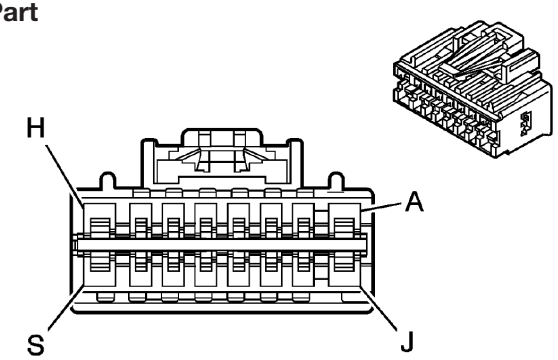
## X700 Body Harness to Left Rear Door Harness (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 3 BK | 1150 | Ground |
| B | 0.35 PU | 169 | Power Window Master Switch Left Rear Down Signal |
| C | 0.35 D-BU | 1307 | Power Window Master Switch Lockout Signal |
| D | 0.35 D-GN | 168 | Power Window Master Switch Left Rear Up Signal |
| E | 0.35 BN/WH | 230 | Instrument Panel Lamp Dimming Control |
| F | 0.35 L-BU/BK | 747 | Left Rear Door Ajar Switch Signal |
| G | 0.5 GY/BK | 6621 | Low Reference (ASF) |
| H | 3 RD/WH | 1240 | Battery Positive Voltage |
| J | -- | -- | Not Used |
| K | 0.8 YE | 116 | Left Rear Speaker Output (-) |
| L | 0.8 BN | 199 | Left Rear Speaker Output (+) |
| M | 0.5 BK | 1150 | Ground |
| | 0.35 BK | 1150 | Ground (5W4 or PPV) |
| N | 0.8 TN | 294 | Door Lock Actuator Unlock Control |
| P | 0.8 GY | 295 | Door Lock Actuator Lock Control |
| R | 0.5 D-GN/WH | 6620 | Left Rear Side Impact Sensing Module Signal (ASF) |
| S | 0.35 OG | 5922 | Non-Driver Door Open Switch Signal |
| | 0.35 OG | 5922 | Non-Driver Door Open Switch Signal |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 3 BK | 1150 | Ground |
| B | 0.35 PU | 169 | Power Window Master Switch Left Rear Down Signal |
| C | 0.35 D-BU | 1307 | Power Window Master Switch Lockout Signal |
| D | 0.35 D-GN | 168 | Power Window Master Switch Left Rear Up Signal |
| E | 0.5 BN/WH | 230 | Instrument Panel Lamp Dimming Control |
| F | 0.35 L-BU/BK | 747 | Left Rear Door Ajar Switch Signal |
| G | 0.5 GY/BK | 6621 | Low Reference (ASF) |
| H | 3 RD/WH | 1240 | Battery Positive Voltage |
| J | -- | -- | Not Used |
| K | 0.5 YE | 116 | Left Rear Speaker Output (-) (UQ3) |
| | 0.8 YE | 116 | Left Rear Speaker Output (-) (UQA/UQS) |
| L | 0.5 BN | 199 | Left Rear Speaker Output (+) (UQ3) |
| | 0.8 BN | 199 | Left Rear Speaker Output (+) (UQA/UQS) |
| M | 0.35 BK | 1150 | Ground |
| N | 0.8 TN | 294 | Door Lock Actuator Unlock Control |
| P | 0.8 GY | 295 | Door Lock Actuator Lock Control |
| R | 0.5 D-GN/WH | 6620 | Left Rear Side Impact Sensing Module Signal (ASF) |
| S | -- | -- | Not Used |

# X800 Body Harness to Right Rear Door Harness

**Connector Part Information**




Harness Type: Body

OEM Connector: 13539998

Service Connector: 19149306

Description: 16-Way F GT 150 280 Series (BK)

**Terminal Part Information**

Pins: B-G, K-R

Terminal/Tray: 12191812/19

Core/Insulation Crimp: Pins: B-G, M, R: E/C

Core/Insulation Crimp: Pins: K-L, N, P: C/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: A, H

Terminal/Tray: 15304713/19

Core/Insulation Crimp: 4/4

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

Pins: S

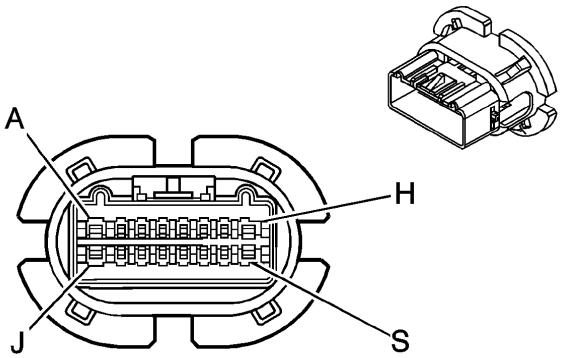
Terminal/Tray: 15304711/8

Core/Insulation Crimp: E/A

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

*(continued on next page)*

**Connector Part Information**




Harness Type: Right Rear Door

OEM Connector: 13540002

Service Connector: 19115742

Description: 16-Way M GT 150 280 Series (NA)

**Terminal Part Information**

Pins: B-G, K-R

Terminal/Tray: 15304702/19

Core/Insulation Crimp: Pins: B-G, K-L (UQ3), M, R: E/4

Core/Insulation Crimp: Pins: K-L (UQA/UQS), N, P: 2/4

Release Tool/Test Probe: 15315247/J-35616-3 (GY)

Pins: A, H

Terminal/Tray: 15304724/8

Core/Insulation Crimp: A/D

Release Tool/Test Probe: 15315247/J-35616-5 (PU)

Pins: S

Terminal/Tray: 15304722/8

Core/Insulation Crimp: E/C

Release Tool/Test Probe: 15315247/J-35616-5 (PU)

*(continued on next page)*

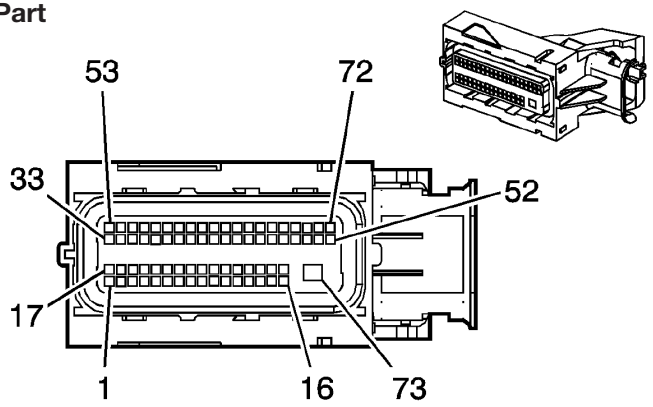
## X800 Body Harness to Right Rear Door Harness (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 3 BK | 1250 | Ground |
| B | 0.35 PU | 171 | Power Window Master Switch Right Rear Down Signal |
| C | 0.35 L-BU/WH | 280 | Power Window Master Switch Lockout Right Rear Signal |
| D | 0.35 L-GN | 170 | Power Window Master Switch Right Rear Up Signal |
| E | 0.5 BN/WH | 230 | Instrument Panel Lamp Dimming Control |
| F | 0.35 L-GN/BK | 748 | Right Rear Door Ajar Switch Signal |
| G | 0.5 L-GN/WH | 6625 | Low Reference (ASF) |
| H | 3 RD/WH | 1340 | Battery Positive Voltage |
| J | -- | -- | Not Used |
| K | 0.8 L-BU | 115 | Right Rear Speaker Output (-) |
| L | 0.8 D-BU | 46 | Right Rear Speaker Output (+) |
| M | 0.5 BK | 1250 | Ground |
| N | 0.8 TN | 294 | Door Lock Actuator Unlock Control |
| P | 0.8 GY | 295 | Door Lock Actuator Lock Control |
| R | 0.5 L-BU/BK | 6624 | Right Rear Side Impact Sensing Module Signal (ASF) |
| S | -- | -- | Not Used |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| A | 3 BK | 1250 | Ground |
| B | 0.35 PU | 171 | Power Window Master Switch Right Rear Down Signal |
| C | 0.35 L-BU/WH | 280 | Power Window Master Switch Lockout Right Rear Signal |
| D | 0.35 L-GN | 170 | Power Window Master Switch Right Rear Up Signal |
| E | 0.5 BN/WH | 230 | Instrument Panel Lamp Dimming Control |
| F | 0.35 L-GN/BK | 748 | Right Rear Door Ajar Switch Signal |
| G | 0.5 L-GN/WH | 6625 | Low Reference (ASF) |
| H | 3 RD/WH | 1340 | Battery Positive Voltage |
| J | -- | -- | Not Used |
| K | 0.5 L-BU | 115 | Right Rear Speaker Output (-) (UQ3) |
| | 0.8 L-BU | 115 | Right Rear Speaker Output (-) (UQA/UQS) |
| L | 0.5 D-BU | 46 | Right Rear Speaker Output (+) (UQ3) |
| | 0.8 D-BU | 46 | Right Rear Speaker Output (+) (UQA/UQS) |
| M | 0.35 BK | 1250 | Ground |
| N | 0.8 TN | 294 | Door Lock Actuator Unlock Control |
| P | 0.8 GY | 295 | Door Lock Actuator Lock Control |
| R | 0.5 L-BU/BK | 6624 | Right Rear Side Impact Sensing Module Signal (ASF) |
| S | -- | -- | Not Used |

# Engine Control Module (ECM) X1 (Diesel)

**Connector Part Information**




Harness: Engine Chassis

OEM: 13649839

Service: 13574946

Description: 73-Way F MX123 34566 Series (BU)

**Terminal Part Information**

Pins: 1-3, 5-7, 9-11, 14-20, 22, 25-31, 33-36, 38-46, 48-59, 61-63, 65-72

Terminal/Tray: 33012-3002/26

Core/Insulation Crimp: E/2

Release Tool/Test Probe: J-38125-217/J-35616-14 (GN)

Pins: 73

Terminal/Tray: Service by Harness - See Part Catalog

Core/Insulation Crimp: Not Available

Release Tool/Test Probe: Pending

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.8 BN/WH | 3100 | DEF Dosing Valve Low Control |
| 2 | 0.8 BN | 3099 | DEF Dosing Valve High Control |
| 3 | 0.5 D-BU | 3105 | DEF Smart Pump Control |
| 4 | -- | -- | Not Available |
| 5 | 0.5 YE/BK | 625 | Starter Enable Relay Control |
| 6 | 0.8 D-GN | 3101 | DEF Reverting Valve High Control |
| 7 | 0.5 BN/WH | 6783 | Low Reference |
| 8 | -- | -- | Not Available |
| 9 | 0.5 L-BU/WH | 6311 | Cruise/ETC/TCC Brake Signal |
| 10 | 0.5 TN/WH | 1695 | Four Wheel Drive Wheel Lock Indicator (NQG) |
| 11 | 0.5 GY/BK | 1694 | Four Wheel Drive Low Signal (NQG) |
| 12-13 | -- | -- | Not Available |
| 14 | 0.5 GY | 2365 | 5 Volt Reference |
| 15 | 0.5 GY/BK | 2931 | Low Reference |
| 16 | 0.5 L-BU/WH | 6288 | Low Reference |
| 17 | 0.5 BN/WH | 419 | Check Engine Indicator Control |
| 18 | 0.5 PU | 2927 | Hydrocarbon Injector Low Control |
| 19 | 0.5 WH/BK | 2366 | Cooling Fan Control Relay Speed Signal |
| 20 | 0.5 D-BU | 507 | Wait To Start Indicator Control |
| 21 | -- | -- | Not Available |
| 22 | 0.5 TN | 3657 | Low Reference |
| 23-24 | -- | -- | Not Available |
| 25 | 0.5 OG/BK | 1786 | Transmission Park/Neutral Signal |
| 26 | 0.5 D-BU | 5985 | Accessory Wakeup Serial Data |
| 27 | 0.5 TN | 3661 | Low Reference |
| 28 | 0.5 TN/BK | 6049 | Low Reference |
| 29 | 0.5 BN | 3108 | DEF Pressure Sensor Signal |
| 30 | 0.5 GY | 3106 | 5 Volt Reference |

*(continued on next page)*

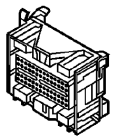
## Engine Control Module (ECM) X1 (Diesel) (cont'd)

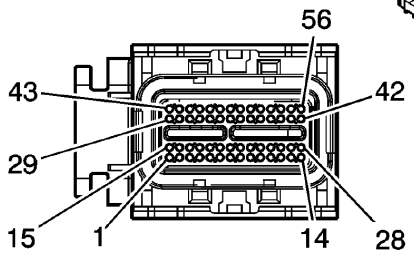
| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 31 | 0.5 TN | 3107 | Low Reference |
| 32 | -- | -- | Not Available |
| 33 | 0.5 D-BU | 2926 | Hydrocarbon Injector High Control |
| 34 | 0.5 D-GN/WH | 459 | A/C Compressor Clutch Relay Control |
| 35 | 0.5 TN | 3104 | Low Reference |
| 36 | 0.5 TN | 5514 | Low Reference |
| 37 | -- | -- | Not Available |
| 38 | 0.5 L-BU | 5377 | Exhaust Gas Temperature Sensor 2 Signal |
| 39 | 0.5 L-BU | 1162 | Accelerator Pedal Position Signal 2 |
| 40 | 0.5 TN/BK | 6289 | Induction Air Temperature Sensor Signal |
| 41 | 0.5 D-BU | 6053 | Exhaust Pressure Sensor Signal 1 |
| 42 | 0.5 WH/BK | 1164 | 5 Volt Reference |
| 43 | 0.5 GY | 6054 | 5 Volt Reference |
| 44 | 0.5 YE | 6055 | Low Reference |
| 45 | 0.5 L-GN | 7494 | High Speed GMLAN Serial Data (-) (3) |
| 46 | 0.5 TN | 2501 | High Speed GMLAN Serial Data (-) (1) |
| 47 | -- | -- | Not Available |
| 48 | 0.5 PK | 439 | Run/Crank Ignition 1 Voltage |
| 49 | 0.5 YE | 492 | Mass Air Flow Sensor Signal |
| 50 | 0.8 BN | 25 | Charge Indicator Control |
| 51 | 0.5 PU | 1272 | Low Reference |
| 52 | 0.5 L-GN/BK | 822 | Vehicle Speed Sensor Signal (except NQF or NQG) |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 53 | 0.8 BK | 3102 | DEF Reverting Valve Low Control |
| 54 | 0.5 GY | 3103 | DEF Smart Pump Supply Voltage |
| 55 | 0.5 BN | 1271 | Low Reference |
| 56 | 0.5 D-BU/WH | 3660 | Exhaust Gas Temperature Sensor 5 Signal |
| 57 | 0.5 L-GN | 5378 | Exhaust Gas Temperature Sensor 3 Signal |
| 58 | 0.5 PU | 1589 | Primary Fuel Level Sensor Signal |
| 59 | 0.5 OG/BK | 380 | A/C Refrigerant Pressure Sensor Signal |
| 60 | -- | -- | Not Available |
| 61 | 0.5 D-BU | 1161 | Accelerator Pedal Position Signal 1 |
| 62 | 0.5 TN | 1274 | 5 Volt Reference |
| 63 | 0.5 GY | 2700 | 5 Volt Reference |
| 64 | -- | -- | Not Available |
| 65 | 0.5 D-GN | 7493 | High Speed GMLAN Serial Data (+) (3) |
| 66 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data (+) (1) |
| 67 | 0.5 RD/WH | 440 | Battery Positive Voltage |
| 68 | 0.5 YE | 5991 | Powertrain Relay Coil Control |
| 69 | 0.5 D-BU | 2364 | Cooling Fan Speed Signal |
| 70 | 0.8 GY | 23 | Generator Field Duty Cycle Signal |
| 71 | 0.5 BN/WH | 6141 | Low Reference |
| 72 | 0.5 PU/WH | 821 | Low Reference (except NQF or NQG) |
| 73 | 3 PK | 1439 | Run/Crank Ignition 1 Voltage |

# Engine Control Module (ECM) X1 (HP2)

**Connector Part Information**






Harness: Engine

OEM: 13510837

Service: 88988373

Description: 56-Way F MX123 Series Sealed (BU Encased in BK)

**Terminal Part Information**

Pins: 3-8, 18-20, 55

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: J/J

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 9-13, 33-54

Terminal/Tray: 33467-0003/23

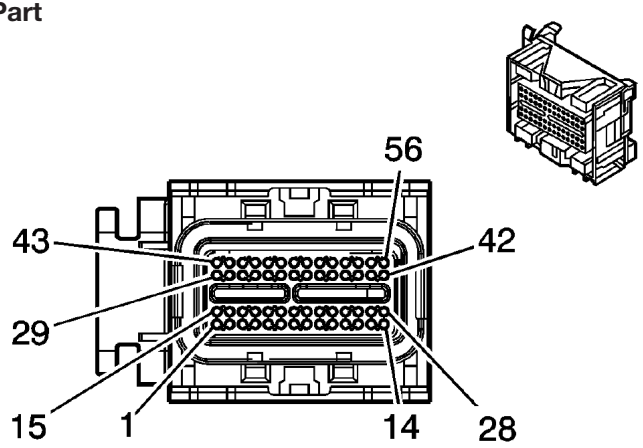
Core/Insulation Crimp: H/H

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1-2 | -- | -- | Not Used |
| 3 | 0.5 PU | 5531 | Hood Switch Signal |
| 4-6 | -- | -- | Not Used |
| 7 | 0.5 L-BU/WH | 6311 | Brake Pedal Switch Signal |
| 8 | 0.5 PK/BK | 109 | Hood Ajar Switch Signal |
| 9 | 0.35 TN/BK | 6049 | Low Reference |
| 10-11 | -- | -- | Not Used |
| 12 | 0.35 BN/WH | 419 | Malfunction Indicator Lamp (MIL) Control |
| 13 | 0.35 D-GN/WH | 465 | Fuel Pump Relay Control |
| 14-17 | -- | -- | Not Used |
| 18 | 0.5 D-BU | 5985 | Serial Data Wake-Up Signal |
| 19 | 0.5 PK | 439 | Ignition Voltage |
| 20 | 0.5 RD/WH | 440 | Battery Positive Voltage |
| 21-32 | -- | -- | Not Used |
| 33 | 0.35 WH/BK | 1164 | 5-Volt Reference 2 |
| 34 | 0.35 GY | 2709 | 5-Volt Reference 1 |
| 35 | 0.35 TN | 1274 | 5-Volt Reference 1 |
| 36 | 0.35 BN | 1271 | Low Reference |
| 37 | 0.35 PU | 1272 | Low Reference |
| 38-39 | -- | -- | Not Used |
| 40 | 0.35 YE | 5991 | Powertrain Relay Coil Control |
| 41 | 0.35 PU | 5128 | High Speed Cooling Fan Relay Control |
| 42-43 | -- | -- | Not Used |
| 44 | 0.35 PU | 1589 | Fuel Level Sensor Signal |
| 45-46 | -- | -- | Not Used |
| 47 | 0.35 D-BU | 1161 | Accelerator Pedal Position Sensor 1 Signal |
| 48 | 0.35 D-GN | 890 | Fuel Tank Pressure Sensor Signal |
| 49 | 0.35 L-BU | 1162 | Accelerator Pedal Position Sensor 2 Signal |
| 50-53 | -- | -- | Not Used |
| 54 | 0.35 D-GN | 335 | Medium Speed Cooling Fan Relay Control |
| 55 | 0.5 WH | 1310 | EVAP Canister Vent Solenoid Control |
| 56 | -- | -- | Not Used |

# Engine Control Module (ECM) X1 (L96)

**Connector Part Information**




Harness: Engine

OEM: 13510837

Service: 88988373

Description: 56-Way F MX123 Series (BK)

**Terminal Part Information**

Pins: 2, 10, 12-14, 16, 24, 26, 28, 30, 34, 38, 40, 50, 52

Terminal/Tray: 33467-0003/23

Core/Insulation Crimp: H/H

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 3-5, 11, 18-20, 25, 27, 29, 31, 33, 39, 43, 45, 47, 53, 56

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: Pins: 3-5, 11, 18-20, 25, 27, 29, 31, 33, 39, 43, 45, 47, 56 - J/J

Core/Insulation Crimp: Pins: 53 - K/K

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | -- | -- | Not Available |
| 2 | 0.35 L-BU | 1162 | APP Sensor 2 Signal |
| 3 | 0.5 YE | 492 | MAF Sensor Signal |
| 4 | 0.5 GY/BK | 1694 | 4WD Low Signal (NQG) |
| 5 | 0.5 TN/WH | 1695 | Axle Switch Signal (NQG) |
| 6-9 | -- | -- | Not Available |
| 10 | 0.35 D-BU | 1161 | APP Sensor 1 Signal |
| 11 | 0.5 YE/WH | 3200 | Throttle Inlet Absolute Pressure Sensor Signal |
| 12 | 0.35 OG/BK | 380 | A/C Refrigerant Pressure Sensor Signal |
| 13 | 0.35 TN | 5514 | Low Reference |
| 14 | 0.35 TN | 1465 | Fuel Pump Relay Control - Secondary |
| 15 | -- | -- | Not Available |
| 16 | 0.35 TN | 1274 | 5-Volt Reference 1 |
| 17 | -- | -- | Not Available |
| 18 | 0.5 D-BU | 5985 | Accessory Wakeup Serial Data |
| 19 | 0.5 PK | 439 | Ignition 1 Voltage |
| 20 | 0.5 RD/WH | 440 | Battery Positive Voltage |
| 21-23 | -- | -- | Not Available |
| 24 | 0.35 WH/BK | 1164 | 5-Volt Reference 2 |
| 25 | 0.5 GY/WH | 3201 | 5-Volt Reference 2 |
| 26 | 0.35 GY/WH | 2700 | 5-Volt Reference 1 |
| 27 | 0.5 YE/BK | 625 | Starter Enable Relay Control |
| 28 | 0.35 D-GN/WH | 465 | Fuel Pump Relay Control - Primary |
| 29 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |

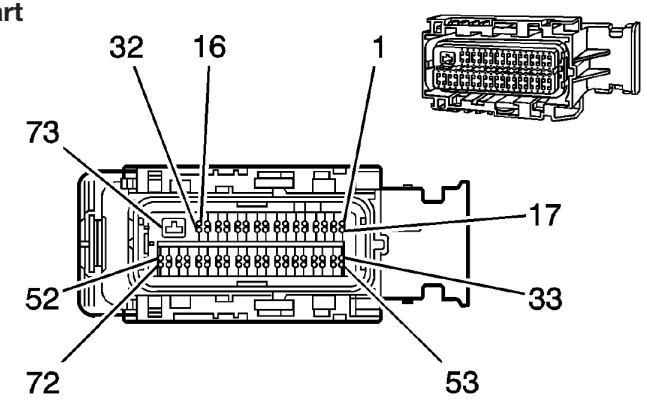
*(continued on next page)*

## Engine Control Module (ECM) X1 (L96) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 30 | 0.35 PU | 1272 | Low Reference |
| 31 | 0.5 TN | 2760 | Low Reference |
| 32 | -- | -- | Not Available |
| 33 | 0.5 L-BU/WH | 6311 | Brake Switch Signal |
| 34 | 0.35 OG/BK | 1786 | Park/Neutral Signal |
| 35-37 | -- | -- | Not Available |
| 38 | 0.35 BN | 1271 | Low Reference |
| 39 | 0.5 TN/WH | 3202 | Low Reference |
| 40 | 0.35 YE | 5991 | Powertrain Relay Coil Control |
| 41-42 | -- | -- | Not Available |
| 43 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 44 | -- | -- | Not Available |
| 45 | 0.5 TN/BK | 472 | IAT Sensor Signal |
| 46 | -- | -- | Not Available |
| 47 | 0.5 BN | 25 | Charge Indicator Signal |
| 48-49 | -- | -- | Not Available |
| 50 | 0.35 YE/BK | 1827 | Vehicle Speed Signal |
| 51 | -- | -- | Not Available |
| 52 | 0.35 BN/WH | 419 | MIL Control |
| 53 | 0.8 D-GN/WH | 459 | A/C Compressor Clutch Relay Control |
| 54-55 | -- | -- | Not Available |
| 56 | 0.5 WH | 1310 | EVAP Canister Vent Solenoid Control |

# Engine Control Module (ECM) X1 (LU3)

**Connector Part Information**




Harness: Engine

OEM: 15499466

Service: 88988931

Description: 73-Way F Receptacle 0.64 2.8 Series Sealed (BK)

**Terminal Part Information**

Pins: 1, 5-6, 8, 13, 18, 21, 24, 25, 27, 30, 32, 39, 41-42, 47, 49, 50, 54, 57, 65-67

Terminal/Tray: 33467-0003/23

Core/Insulation Crimp: H/H

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 2-3, 9-10, 15-17, 19-20, 26, 37, 43-44, 55, 58, 70, 72

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: J/J

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 73

Terminal/Tray: See Terminal Repair Kit

Core/Insulation Crimp: See Terminal Repair Kit

Release Tool/Test Probe: See Terminal Repair Kit

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.35 D-BU | 1161 | APP Sensor 1 Signal |
| 2 | 0.5 PU | 1670 | HO2S High Signal Bank 2 Sensor 2 |
| 3 | 0.5 D-BU | 5985 | Accessory Wakeup Serial Data |
| 4 | -- | -- | Not Used |
| 5 | 0.35 D-GN | 335 | Low Speed Cooling Fan Relay Control |
| 6 | 0.35 D-GN/WH | 465 | Fuel Pump Relay Control - Primary |
| 7 | -- | -- | Not Used |
| 8 | 0.35 TN | 514 | Low Reference (CJ2 or C67) |
| 9 | 0.5 TN/WH | 1669 | HO2S Low Signal Bank 1 Sensor 2 |
| 10 | 0.5 TN | 1671 | H02S Low Signal Bank 2 Sensor 2 |
| 11-12 | -- | -- | Not Used |
| 13 | 0.35 YE | 5991 | Powertrain Relay Coil Control |
| 14 | -- | -- | Not Used |
| 15 | 0.5 GY/WH | 3122 | HO2S Heater Low Control Bank 1 Sensor 2 |
| 16 | 0.5 OG/WH | 3223 | HO2S Heater Low Control bank 1 Sensor 2 |
| 17 | 0.5 PU/WH | 1668 | HO2S High Signal Bank 1 Sensor 2 |
| 18 | 0.35 L-BU | 1162 | APP Sensor 2 Signal |
| 19 | 0.5 PK | 439 | Ignition 1 Voltage |
| 20 | 0.5 RD/WH | 440 | Battery Positive Voltage |
| 21 | 0.35 PU | 1272 | Low Reference |
| 22-23 | -- | -- | Not Used |
| 24 | 0.35 TN/BK | 6049 | Low Reference |

*(continued on next page)*

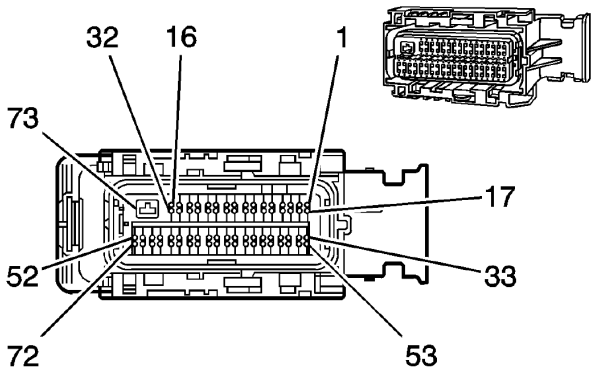
## Engine Control Module (ECM) X1 (LU3) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 25 | 0.35 OG/BK | 380 | A/C Refrigerant Pressure Sensor Signal (CJ2 or C67) |
| 26 | 0.5 GY/BK | 1694 | 4WD Low Signal (NQG) |
| 27 | 0.35 BN/WH | 419 | MIL Control |
| 28-29 | -- | -- | Not Used |
| 30 | 0.35 D-GN/WH | 459 | A/C Compressor Clutch Relay Control (CJ2 or C67) |
| 31 | -- | -- | Not Used |
| 32 | 0.35 YE/BK | 625 | Starter Relay Coil Control |
| 33 | -- | -- | Not Used |
| 34 | 0.5 L-GN/BK | 822 | Vehicle Speed Sensor (VSS) Low Signal (TZ0) |
| 35 | -- | -- | Not Used |
| 36 | 0.35 YE | 43 | Ignition Voltage |
| 37 | 0.5 YE | 492 | MAF Sensor Signal |
| 38 | -- | -- | Not Used |
| 39 | 0.35 PU | 1589 | Fuel Level Sensor Signal - Primary |
| 40 | -- | -- | Not Used |
| 41 | 0.35 BN | 1271 | Low Reference |
| 42 | 0.35 D-GN | 890 | Fuel Tank Pressure Sensor Signal |
| 43 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 44 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 45-46 | -- | -- | Not Used |
| 47 | 0.35 WH/BK | 1164 | 5-Volt Reference 2 |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 48 | -- | -- | Not Used |
| 49 | 0.35 D-BU | 473 | High Speed Cooling Fan Relay Control |
| 50 | 0.35 YE/BK | 1827 | Vehicle Speed Signal (except MEX) |
| 51-53 | -- | -- | Not Used |
| 54 | 0.35 OG/BK | 6399 | Replicated TOS Signal (except TZ0) |
| | 0.5 PU/WH | 821 | Vehicle Speed Sensor (VSS) High Signal (TZ0) |
| 55 | 0.5 L-BU/WH | 6311 | TCC Brake Signal |
| 56 | 0.35 WH/BK | 1164 | 5-Volt Reference 2 |
| 57 | 0.35 OG/BK | 1786 | Park/Neutral Signal (except TZ0) |
| | 0.35 D-GN | 1433 | Clutch Start Switch Signal (TZ0) |
| 58 | 0.5 TN | 472 | IAT Sensor Signal (except MEX) |
| | 0.5 TN/BK | 472 | IAT Sensor Signal (MEX) |
| 59-64 | -- | -- | Not Used |
| 65 | 0.35 GY | 2700 | 5-Volt Reference 1 |
| 66 | 0.35 GY | 2709 | 5-Volt Reference 1 |
| 67 | 0.35 TN | 1274 | 5-Volt Reference 1 |
| 68-69 | -- | -- | Not Used |
| 70 | 0.5 WH | 1310 | EVAP Canister Vent Solenoid Control |
| 71 | 0.5 L-BU | 2182 | Reverse Lamp Relay Control (TZ0) |
| 72 | 0.5 TN/WH | 1695 | Axle Switch Signal (NQG) |
| 73 | 0.5 PK | 1339 | Ignition 1 Voltage |

# Engine Control Module (ECM) X1 (LY2, LMG, LC9, LY5, LH6, L76 or L9H)

**Connector Part Information**




Harness: Engine

OEM: 13616079

Service: 88988931

Description: 73-Way F Receptacle 0.64 2.8 Series Sealed (BK)

**Terminal Part Information**

Pins: 1, 13, 24, 30, 32, 50, 57

Pins: 12, 16, 23, 29, 31, 33-34, 36, 56, 59, 63, 68, 70-71

Terminal/Tray: 33467-0003/23

Core/Insulation Crimp: H/H

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 2-3, 9-10, 19-20, 37, 70, 72

Pins: 11, 18, 27-28, 38, 41, 47, 49, 52, 61, 64-65, 69, 71

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: J/J

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 73

Terminal/Tray: 7116-4152-02/9

Core/Insulation Crimp: A/5

Release Tool/Test Probe: 12094430/J-35616-35 (VT)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.35 OG/BK | 1786 | Park/Neutral Signal |
| 2 | 0.5 GY/BK | 1694 | 4WD Low Signal (NQG) |
| 3 | 0.5 TN/WH | 1695 | Axle Switch Signal (NQG) |
| 4-8 | -- | -- | Not Used |
| 9 | 0.5 L-BU/WH | 6311 | Brake Switch Signal |
| 10 | 0.5 PU/WH | 1668 | HO2S High Signal Bank 1 Sensor 2 |
| 11 | 0.5 TN/WH | 1669 | HO2S Low Signal Bank 1 Sensor 2 |
| 12 | 0.35 OG/BK | 380 | A/C Refrigerant Pressure Sensor Signal (CJ2 or C67) |
| 13 | 0.35 TN | 5514 | Low Reference (CJ2 or C67) |
| 14-15 | -- | -- | Not Used |
| 16 | 0.35 PU | 1589 | Fuel Level Sensor Signal - Primary |
| 17 | 0.35 D-BU/WH | 473 | High Speed Cooling Fan Relay Control |
| 18 | 0.5 D-BU | 5985 | Accessory Wakeup Serial Data |
| 19 | 0.5 PK | 439 | Ignition 1 Voltage |
| 20 | 0.5 RD/WH | 440 | Battery Positive Voltage |
| 21-22 | -- | -- | Not Used |
| 23 | 0.35 PU | 1272 | Low Reference |
| 24 | 0.35 D-GN | 890 | Fuel Tank Pressure Sensor Signal |
| 25-26 | -- | -- | Not Used |
| 27 | 0.5 TN/BK | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 28 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 29 | 0.35 D-BU | 1161 | APP Sensor 1 Signal |
| 30 | 0.35 BN | 1271 | Low Reference |

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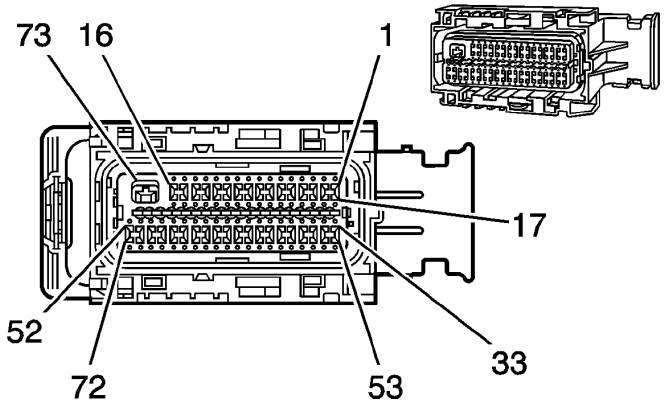
## Engine Control Module (ECM) X1 (LY2, LMG, LC9, LY5, LH6, L76 or L9H) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 31 | 0.35 TN/BK | 6049 | Low Reference |
| 32 | 0.35 L-BU | 1162 | APP Sensor 2 Signal |
| 33 | 0.35 GY | 2709 | 5-Volt Reference 1 |
| 34 | 0.35 GY/WH | 2700 | 5-Volt Reference 1 |
| 35 | 0.5 TN | 2760 | Low Reference |
| 36 | 0.35 TN | 1274 | 5-Volt Reference 1 |
| 37 | 0.5 TN/BK | 472 | IAT Sensor Signal |
| 38 | 0.5 TN | 2760 | Low Reference |
| 39-40 | -- | -- | Not Used |
| 41 | 0.5 YE | 492 | MAF Sensor Signal |
| 42-46 | -- | -- | Not Used |
| 47 | 0.5 PK/BK | 1339 | Ignition 1 Voltage |
| 48 | -- | -- | Not Used |
| 49 | 0.5 TN | 1671 | HO2S Low Signal Bank 2 Sensor 2 |
| 50 | 0.35 D-GN/WH | 465 | Fuel System Control Module Signal Fuel Pump Relay Control - Primary |
| 51 | -- | -- | Not Used |
| 52 | 0.5 YE/BK | 625 | Starter Enable Relay Control |
| 53-55 | -- | -- | Not Used |
| 56 | 0.35 WH/BK | 1164 | 5-Volt Reference 2 |
| 57 | -- | -- | Not Used |
| 58 | 0.35 D-GN | 335 | Low Speed Cooling Fan Relay Control |
| 59 | 0.35 YE | 5991 | Powertrain Relay Coil Control |
| 60 | -- | -- | Not Used |
| 61 | 0.5 WH | 1310 | EVAP Canister Venst Solenoid Control |
| 62 | -- | -- | Not Used |
| 63 | 0.35 D-GN/WH | 459 | A/C Compressor Clutch Relay Control (CJ2 or C67) |
| 64 | 0.5 OG/WH | 3223 | HO2S Heater Low Control Bank 2 Sensor 2 |
| 65 | 0.5 GY/WH | 3122 | HO2S Heater Low Control Bank 1 Sensor 2 |
| 66-67 | -- | -- | Not Used |
| 68 | 0.35 BN/WH | 419 | MIL Control |
| 69 | 0.5 PU | 1670 | HO2S High Signal Bank 2 Sensor 2 |
| 70 | -- | -- | Not Used |
| 71 | 0.35 OG/BK | 6399 | Replicated TOS Signal (except 31 Series without NQF or NQG) |
| | 0.5 PU/WH | 821 | Vehicle Speed Sensor (VSS) High Signal (MYC with NQG or NQH) |
| 72 | 0.5 L-GN/BK | 822 | Vehicle Speed Sensor (VSS) Low Signal (MYC with NQG or NQH) |
| 73 | 3 BK/WH | 451 | Ground |

# Engine Control Module (ECM) X1 (LY6)

**Connector Part Information**




Harness: Engine

OEM: 13580788

Service: 88988931

Description: 73-Way F MX123 34566 Series (BK)

**Terminal Part Information**

Pins: 1, 12, 13, 16, 23, 24, 29-34, 36, 50, 51, 56, 57, 59, 63, 68, 70, 71

Terminal/Tray: 33467-0003/23

Core/Insulation Crimp: H/H

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 2, 3, 9-11, 18-20, 27, 28, 37, 38, 41, 47, 49, 52, 61, 64, 56, 59, 71, 72

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: J/J

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pin: 73

Terminal/Tray: 7116-4152-02/9

Core/Insulation Crimp: A/5

Release Tool/Test Probe: 12094430/J-35616-35 (VT)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.35 OG/BK | 1786 | Park/Neutral Signal |
| 2 | 0.5 GY/BK | 1694 | 4WD Low Signal (NQG) |
| 3 | 0.5 TN/WH | 1695 | Axle Switch Signal (NQG) |
| 4-8 | -- | -- | Not Used |
| 9 | 0.5 L-BU/WH | 6311 | Brake Switch Signal |
| 10 | 0.5 PU/WH | 1668 | HO2S High Signal Bank 1 Sensor 2 |
| 11 | 0.5 TN/WH | 1669 | HO2S Low Signal Bank 1 Sensor 2 |
| 12 | 0.35 OG/BK | 380 | A/C Refrigerant Pressure Sensor Signal (CJ2 or C67) |
| 13 | 0.35 TN | 5514 | Low Reference (CJ2 or C67) |
| 14-15 | -- | -- | Not Used |
| 16 | 0.35 PU | 1589 | Fuel Level Sensor Signal - Primary |
| 17 | -- | -- | Not Used |
| 18 | 0.5 D-BU | 5985 | Accessory Wakeup Serial Data |
| 19 | 0.5 PK | 439 | Ignition 1 Voltage |
| 20 | 0.5 RD/WH | 440 | Battery Positive Voltage |
| 21-22 | -- | -- | Not Used |
| 23 | 0.35 PU | 1272 | Low Reference |
| 24 | 0.35 D-GN | 890 | Fuel Tank Pressure Sensor Signal |
| 25-26 | -- | -- | Not Used |
| 27 | 0.5 TN/BK | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 28 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 29 | 0.35 D-BU | 1161 | APP Sensor 1 Signal |
| 30 | 0.35 BN | 1271 | Low Reference |
| 31 | 0.35 TN/BK | 6049 | Low Reference |

*(continued on next page)*

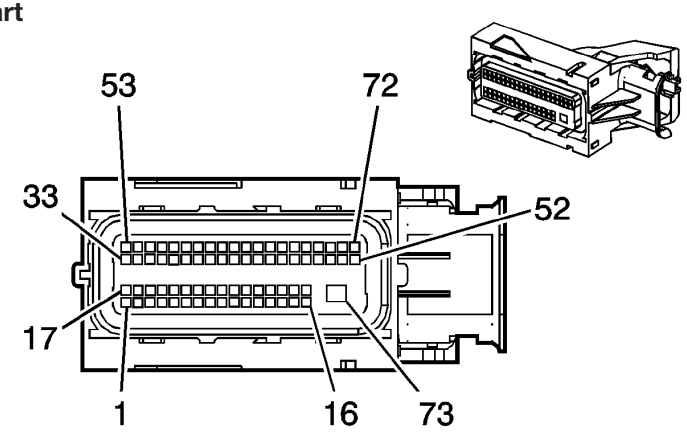
## Engine Control Module (ECM) X1 (LY6) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 32 | 0.35 L-BU | 1162 | APP Sensor 2 Signal |
| 33 | 0.35 GY | 2709 | 5-Volt Reference 1 |
| 34 | 0.35 GY/WH | 2700 | 5-Volt Reference 1 |
| 35 | 0.5 TN | 2760 | Low Reference |
| 36 | 0.35 TN | 1274 | 5-Volt Reference 1 |
| 37 | 0.5 TN/BK | 472 | IAT Sensor Signal |
| 38 | 0.5 TN | 2760 | Low Reference |
| 39-40 | -- | -- | Not Used |
| 41 | 0.5 YE | 492 | MAF Sensor Signal |
| 42-46 | -- | -- | Not Used |
| 47 | 0.5 PK/BK | 1339 | Ignition 1 Voltage |
| 48 | -- | -- | Not Used |
| 49 | 0.5 TN | 1671 | JO2S Low Signal Bank 2 Sensor 2 |
| 50 | 0.35 D-GN/WH | 465 | Fuel Pump Relay Control - Primary |
| 51 | 0.35 TN | 1465 | Fuel Pump Relay Control - Secondary |
| 52 | 0.5 YE/BK | 625 | Starter Enable Relay Control |
| 53-55 | -- | -- | Not Used |
| 56 | 0.35 WH/BK | 1164 | 5-Volt Reference 2 |
| 57 | 0.35 YE/BK | 1827 | Vehicle Speed Signal |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 58 | -- | -- | Not Used |
| 59 | 0.35 YE | 5991 | Powertrain Relay Coil Control |
| 60 | -- | -- | Not Used |
| 61 | 0.5 WH | 1310 | EVAP Canister Vent Solenoid Control |
| 62 | -- | -- | Not Used |
| 63 | 0.35 D-GN/WH | 459 | A/C Compressor Clutch Relay Control (CJ2 or C67) |
| 64 | 0.5 OG/WH | 3223 | HO2S Heater Low Control Bank 2 Sensor 2 |
| 65 | 0.5 GY/WH | 3122 | HO2S Heater Low Control Bank 2 Sensor 1 |
| 66-67 | -- | -- | Not Used |
| 68 | 0.35 BN/WH | 419 | MIL Control |
| 69 | 0.5 PU | 1970 | HO2S High Signal Bank 2 Sensor 2 |
| 70 | 0.35 L-BU | 1937 | Secondary Fuel Level Sensor Signal |
| 71 | 0.35 OG/BK | 6399 | Replicated TOS Signal (except 31 Series without NQF or NQG) |
|  | 0.5 PU/WH | 821 | VSS High Signal (NQF or NQG) |
| 72 | 0.5 L-GN/BK | 822 | VSS Low Signal (NQF or NQG) |
| 73 | 3 BK/WH | 451 | Ground |

# Engine Control Module (ECM) X2 (Diesel)

**Connector Part Information**




Harness: Engine

OEM: 12603596

Service: 13574947

Description: 73-Way F MX123 34566 Series (BK)

**Terminal Part Information**

Pins: 1, 3, 5-11, 22, 25, 27, 41, 47-48, 66-67

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: K/K

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 4, 13-19, 21, 29-32

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: J/J

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 73

Terminal/Tray: 7116-4152-02/9

Core/Insulation Crimp: A/5

Release Tool/Test Probe: 12094430/J-35616-35 (VT)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.5 D-GN/WH | 465 | Fuel Pump Primary Relay Control (N2N) |
| 2 | -- | -- | Not Available |
| 3 | 0.5 YE | 2928 | Fuel Metering Valve High Control |
| 4 | 0.8 PU/WH | 2530 | Fuel Rail Pressure Solenoid Supply Voltage |
| 5 | 0.5 BK | 2929 | Fuel Metering Valve Low Control |
| 6 | 0.5 WH | 5931 | Variable Nozzle Turbo Solenoid Low Signal |
| 7 | 0.5 TN | 2752 | Low Reference |
| 8 | 0.5 TN | 2753 | Low Reference |
| 9 | 0.5 BN | 1174 | Oil Level Switch Signal |
| 10 | 0.5 BN | 6782 | Low Reference |
| 11 | 0.5 TN | 3653 | Low Reference (LML) |
| 12 | -- | -- | Not Available |
| 13 | 0.8 BN/WH | 4901 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 1 |
| 14 | 0.8 TN/WH | 4907 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 7 |
| 15 | 0.8 L-BU | 4804 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 4 |
| 16 | 0.8 BN | 4801 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 1 |
| 17 | 0.8 BK/WH | 451 | Ground |
| 18 | 0.8 BK/WH | 451 | Ground |
| 19 | 0.8 YE | 2834 | Low Reference |
| 20 | -- | -- | Not Available |
| 21 | 0.8 BK/WH | 451 | Ground |
| 22 | 0.5 D-BU | 5930 | Variable Nozzle Turbo Solenoid High Signal |

*(continued on next page)*

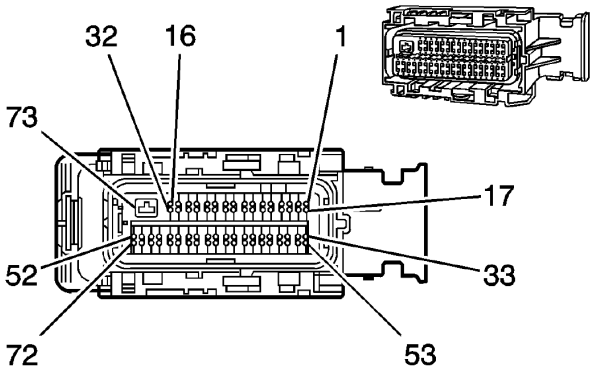
## Engine Control Module (ECM) X2 (Diesel) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 23-24 | -- | -- | Not Available |
| 25 | 0.5 OG/BK | 5929 | Low Reference |
| 26 | -- | -- | Not Available |
| 27 | 0.5 YE/BK | 1827 | Vehicle Speed Signal |
| 28 | -- | -- | Not Available |
| 29 | 0.8 L-BU/WH | 4904 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 4 |
| 30 | 0.8 PU/WH | 4906 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 6 |
| 31 | 0.8 TN | 4807 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 7 |
| 32 | 0.8 PU | 4806 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 6 |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 33-40 | -- | -- | Not Available |
| 41 | 0.5 BK | 2755 | Low Reference |
| 42-46 | -- | -- | Not Available |
| 47 | 0.5 GY | 2702 | 5 Volt Reference |
| 48 | 0.5 GY | 3652 | 5 Volt Reference (LML) |
| 49-65 | -- | -- | Not Available |
| 66 | 0.5 TN | 5928 | Variable Nozzle Turbo Position Sensor Voltage Reference |
| 67 | 0.5 PU/WH | 6270 | 5 Volt Reference |
| 68-72 | -- | -- | Not Available |
| 73 | 3 BK/WH | 451 | Ground |

# Engine Control Module (ECM) X2 (HP2)

**Connector Part Information**




Harness:
Engine

OEM: 15499466

Service: 88988931

Description: 73-Way F MX123 Series, Sealed (BK)

**Terminal Part Information**

Pins: 73

Terminal/Tray: 7116-4152-02/9

Core/Insulation Crimp: A/5

Release Tool/Test Probe: 12094430/J-35616-35 (VT)

Pins: 14, 23, 27, 29, 39, 43-46, 59, 63-66

Terminal/Tray: 33467-0003/23

Core/Insulation Crimp: H/H

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 1-13, 16-19, 24, 28, 32-35, 40-42, 48-55, 60-62, 67-72

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: Pins 1-5, 11-72 - J/J

Core/Insulation Crimp: Pins 6-9 - K/K

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.5 PU | 2121 | Ignition Coil 1 Control |
| 2 | 0.5 TN | 1664 | HO2S Low Signal - Bank 1 Sensor 1 |
| 3 | 0.5 PU/WH | 1665 | HO2S High Signal - Bank 1 Sensor 1 |
| 4 | 0.5 PU/WH | 1668 | HO2S High Signal - Bank 1 Sensor 2 |
| 5 | 0.5 TN/WH | 1669 | HO2S Low Signal - Bank 1 Sensor 2 |
| 6 | 0.8 L-BU | 1876 | Knock Sensor 2 Signal |
| 7 | 0.8 GY | 2303 | Knock Sensor Signal |
| 8 | 0.8 L-BU | 496 | Knock Sensor 1 Signal |
| 9 | 0.8 GY | 1716 | Knock Sensor Signal |
| 10 | -- | -- | Not Used |
| 11 | 0.5 YE | 581 | TAC Motor Control - 1 |
| 12 | 0.5 BN | 582 | TAC Motor Control - 2 |
| 13 | 0.5 PK | 1339 | Ignition Voltage |
| 14 | 0.35 PU | 5284 | Cam Phasor Control |
| 15 | -- | -- | Not Used |
| 16 | 0.5 PK/BK | 1746 | Fuel Injector 3 Control |
| 17 | 0.5 PU/WH | 2128 | Ignition Coil 8 Control |
| 18 | 0.5 D-GN/WH | 2124 | Ignition Coil 4 Control |
| 19 | 0.5 BN/WH | 2130 | Low Reference |
| 20-22 | -- | -- | Not Used |
| 23 | 0.35 BN | 6266 | Low Reference |
| 24 | 0.5 BK | 2755 | Low Reference |
| 25-26 | -- | -- | Not Used |
| 27 | 0.35 GY/BK | 6272 | Low Reference |
| 28 | 0.5 PK/BK | 1339 | Ignition Voltage |

*(continued on next page)*

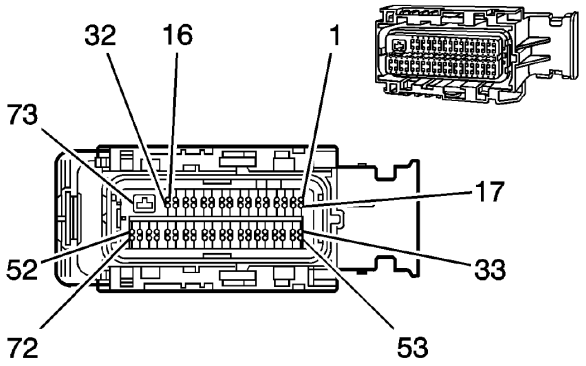
## Engine Control Module (ECM) X2 (HP2) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 29 | 0.35 TN | 2752 | Low Reference |
| 30-31 | -- | -- | Not Used |
| 32 | 0.5 L-GN/BK | 1745 | Fuel Injector 2 Control |
| 33 | 0.5 OG | 2127 | Ignition Coil 7 Control |
| 34 | 0.5 D-GN | 2125 | Ignition Coil 5 Control |
| 35 | 0.5 BN | 2129 | Low Reference |
| 36-38 | -- | -- | Not Used |
| 39 | 0.35 D-BU | 6259 | 5-Volt Reference 1 |
| 40 | 0.5 GY | 2705 | 5-Volt Reference 1 |
| 41 | -- | -- | Not Used |
| 42 | 0.5 TN | 2760 | Low Reference |
| 43 | 0.35 PU/WH | 6270 | 5-Volt Reference 2 |
| 44 | 0.35 GY | 2701 | 5-Volt Reference 2 |
| 45 | -- | -- | Not Used |
| 46 | 0.35 TN | 2199 | Low Reference |
| 47 | -- | -- | Not Used |
| 48 | 0.5 D-BU/WH | 878 | Fuel Injector 8 Control |
| 49 | 0.5 TN/WH | 845 | Fuel Injector 5 Control |
| 50-51 | -- | -- | Not Used |
| 52 | 0.5 YE/BK | 846 | Fuel Injector 6 Control |
| 53 | 0.5 OG/WH | 2122 | Ignition Coil 2 Control |
| 54 | 0.5 L-BU/WH | 2126 | Ignition Coil 6 Control |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 55 | 0.5 L-BU | 2123 | Ignition Coil 3 Control |
| 56-58 | -- | -- | Not Used |
| 59 | 0.35 D-BU/ WH | 6265 | Camshaft Position Sensor Signal |
| 60 | 0.5 TN/WH | 331 | Oil Pressure Sensor Signal |
| 61 | -- | -- | Not Used |
| 62 | 0.5 TN/BK | 472 | Intake Air Temperature (IAT) Sensor Signal |
| 63 | 0.35 WH/BK | 6271 | Crankshaft Position Sensor Signal |
| 64 | 0.35 D-GN | 485 | Throttle Position Sensor 1 Signal |
| 65 | -- | -- | Not Used |
| 66 | 0.35 PU | 486 | Throttle Position Sensor 2 Signal |
| 67 | 0.5 YE | 492 | Mass Air Flow (MAF) Sensor Signal |
| 68 | 0.5 GY/WH | 3113 | HO2S Heater Low Control - Bank 1 Sensor 1 |
| 69 | 0.5 GY/WH | 3122 | HO2S Heater Low Control - Bank 2 Sensor 1 |
| 70 | 0.5 L-BU/BK | 844 | Fuel Injector 4 Control |
| 71 | 0.5 OG/BK | 877 | Fuel Injector 7 Control |
| 72 | 0.5 TN | 1744 | Fuel Injector 1 Control |
| 73 | 3 BK/WH | 451 | Ground |

# Engine Control Module (ECM) X2 (L96)

**Connector Part Information**




Harness: Engine

OEM: 15499466

Service: 88988931

Description: 73-Way F MX123 Series, Sealed (BK)

**Terminal Part Information**

Pins: 11, 24, 29, 40, 43-44, 60, 63, 65

Terminal/Tray: 33467-0003/23

Core/Insulation Crimp: H/H

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 3-5, 11, 18-20, 25, 27, 29, 31, 33, 39, 43, 45, 47, 53, 56

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: Pins: 1-9, 15-20, 25, 28, 33-36, 41, 47-50, 52-56, 61, 67-70, 72 - J/J

Core/Insulation Crimp: Pins: 49-50, 69-70 - K/K

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 73

Terminal/Tray: 7116-4152-02/9

Core/Insulation Crimp: A/5

Release Tool/Test Probe: J-38125-11A/J-35616-35 (VT)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.5 PU | 2121 | IC 1 Control |
| 2 | 0.5 TN | 1744 | Fuel Injector 1 Control |
| 3 | 0.5 D-BU/WH | 878 | Fuel Injector 8 Control |
| 4 | 0.5 OG/BK | 877 | Fuel Injector 7 Control |
| 5 | 0.5 L-GN/BK | 1745 | Fuel Injector 2 Control |
| 6 | 0.5 YE/BK | 846 | Fuel Injector 6 Control |
| 7 | 0.5 TN/WH | 845 | Fuel Injector 5 Control |
| 8 | 0.5 L-BU/BK | 844 | Fuel Injector 4 Control |
| 9 | 0.5 PK/BK | 1746 | Fuel Injector 3 Control |
| 10 | -- | -- | Not Available |
| 11 | 0.35 PU | 5284 | Camshaft Actuator Solenoid Control |
| 12-14 | -- | -- | Not Available |
| 15 | 0.5 YE | 581 | TAC Motor Control - 1 |
| 16 | 0.5 BN | 582 | TAC Motor Control - 2 |
| 17 | 0.5 PU/WH | 2128 | IC 8 Control |
| 18 | 0.5 D-GN/WH | 2124 | IC 4 Control |
| 19 | 0.5 BN/WH | 2130 | Low Reference |
| 20 | 0.5 GY | 6272 | Low Reference |
| 21-23 | -- | -- | Not Available |
| 24 | 0.35 BN | 6266 | Low Reference |
| 25 | 0.5 BK | 2755 | Low Reference |
| 26-27 | -- | -- | Not Available |
| 28 | 0.5 PK/BK | 1339 | Ignition 1 Voltage |
| 29 | 0.35 TN | 2199 | Low Reference |
| 30-32 | -- | -- | Not Available |
| 33 | 0.5 OG | 2127 | IC 7 Control |
| 34 | 0.5 D-GN | 2125 | IC 5 Control |

*(continued on next page)*

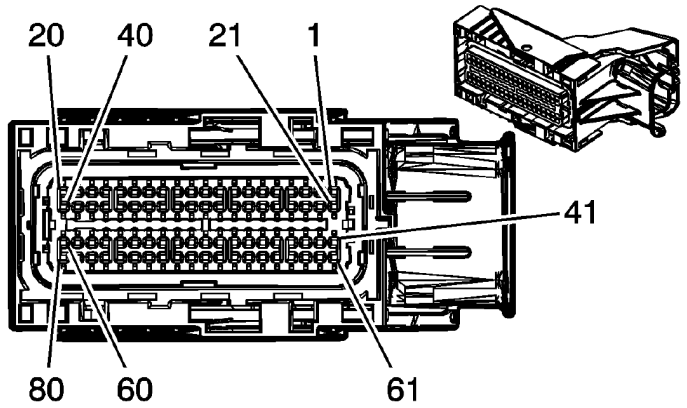
## Engine Control Module (ECM) X2 (L96) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 35 | 0.5 BN | 2129 | Low Reference |
| 36 | 0.5 PU | 6270 | 5-Volt Reference 2 |
| 37-39 | -- | -- | Not Available |
| 40 | 0.35 D-BU | 6259 | 5-Volt Reference 1 |
| 41 | 0.5 GY | 2705 | 5-Volt Reference 1 |
| 42 | -- | -- | Not Available |
| 43 | 0.35 GY | 2701 | 5-Volt Reference 2 |
| 44 | 0.35 TN | 2752 | Low Reference |
| 45-46 | -- | -- | Not Available |
| 47 | 0.5 TN | 1664 | HO2S Low Signal - Bank 1 Sensor 1 |
| 48 | 0.5 TN | 1667 | HO2S Low Signal - Bank 2 Sensor 1 |
| 49 | 0.8 GY | 1716 | KS 1 Signal |
| 50 | 0.8 GY | 2303 | KS 2 Signal |
| 51 | -- | -- | Not Available |
| 52 | 0.5 L-GN | 3212 | HO2S Heater Low Control - Bank 2 Sensor 1 |
| 53 | 0.5 OG/WH | 2122 | IC 2 Control |
| 54 | 0.5 L-BU/WH | 2126 | IC 6 Control |
| 55 | 0.5 L-BU | 2123 | IC 3 Control |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 56 | 0.5 L-GN | 6271 | CKP Sensor Signal |
| 57-59 | -- | -- | Not Available |
| 60 | 0.35 D-BU/ WH | 6265 | CMP Sensor Signal |
| 61 | 0.5 TN/WH | 331 | Oil Pressure Sensor Signal |
| 62 | -- | -- | Not Available |
| 63 | 0.35 D-GN | 485 | TP Sensor 1 Signal |
| 64 | -- | -- | Not Available |
| 65 | 0.35 PU | 486 | TP Sensor 2 Signal |
| 66 | -- | -- | Not Available |
| 67 | 0.5 PU/WH | 1665 | HO2S High Signal - Bank 1 Sensor 1 |
| 68 | 0.5 PU | 1666 | HO2S High Signal - Bank 2 Sensor 1 |
| 69 | 0.8 D-BU | 496 | KS 1 Signal |
| 70 | 0.8 L-BU | 1876 | KS 2 Signal |
| 71 | -- | -- | Not Available |
| 72 | 0.5 GY/WH | 3113 | HO2S Heater Low Control - Bank 1 Sensor 1 |
| 73 | 3 BK/WH | 451 | Ground |

# Engine Control Module (ECM) X2 (LMG, LC9, LY5, LH6, L76 or L9H without Y91)

**Connector Part Information**




Harness: Engine

OEM: 13528613

Service: 19115670

Description: 80-Way F 0.64 Sealed (GY)

**Terminal Part Information**

Pins: 2-3, 16, 35, 41, 44, 50, 52, 63-66, 68-69

Terminal/Tray: 33467-0003/23

Core/Insulation Crimp: H/H

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 5-6, 8, 12-13, 17-22, 32-34, 37-41, 43, 50, 53, 56-61, 70-79, 26-27, 29-30

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: Pins 5-6, 8, 12-13, 17-22, 32, 33, 37-40, 43, 53, 56-57, 58-61, 70-79 - J/J

Core/Insulation Crimp: Pins 26-27, 29-30 - K/K

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | -- | -- | Not Used |
| 2 | 0.35 PU/WH | 6270 | 5-Volt Reference 2 |
| 3 | 0.35 GY | 2701 | 5-Volt Reference 2 |
| 4 | -- | -- | Not Used |
| 5 | 0.5 BN | 582 | TAC Motor Control - 2 |
| 6 | 0.5 YE | 581 | TAC Motor Control - 1 |
| 7 | -- | -- | Not Used |
| 8 | 0.5 D-GN/WH | 428 | EVAP Canister Purge Solenoid Control |
| 9 | 0.5 GY | 5493 | Cylinder Shutoff Solenoid Control (3) (except L9H) |
| 10 | 0.5 D-BU | 5491 | Cylinder Shutoff Solenoid Control (1) (except L9H) |
| 11 | 0.5 OG | 5494 | Cylinder Shutoff Solenoid Control (4) (except L9H) |
| 12 | 0.5 GY/WH | 3113 | HO2S Heater Low Control - Bank 1 Sensor 1 |
| 13 | 0.5 L-GN | 3212 | HO2S Heater Low Control - Bank 2 Sensor 1 |
| 14 | 0.5 L-GN/BK | 5492 | Cylinder Shutoff Solenoid Control (2) (except L9H) |
| 15 | -- | -- | Not Used |
| 16 | 0.35 PU | 5284 | Camshaft Actuator Solenoid Control (L76 or L9H) |
| 17 | 0.5 D-BU/WH | 878 | Fuel Injector 8 Control |
| 18 | 0.5 TN/WH | 845 | Fuel Injector 5 Control |
| 19 | 0.5 YE/BK | 846 | Fuel Injector 6 Control |
| 20 | 0.5 TN | 1744 | Fuel Injector 1 Control |
| 21 | 0.5 YE | 410 | ECT Sensor Signal |
| 22 | 0.5 TN | 2761 | Low Reference |

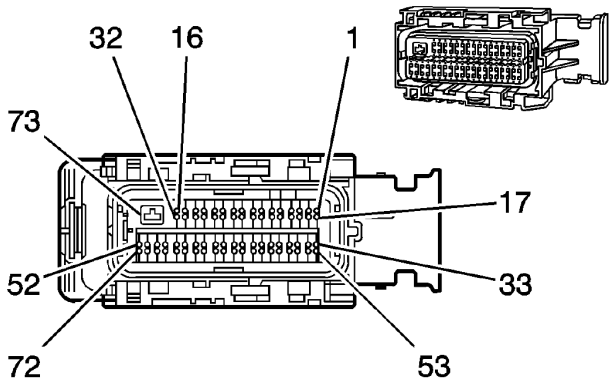
*(continued on next page)*

## Engine Control Module (ECM) X2 (LMG, LC9, LY5, LH6, L76 or L9H without Y91) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 23-25 | -- | -- | Not Used |
| 26 | 0.8 D-BU | 496 | KS 1 Signal |
| 27 | 0.8 GY | 1716 | KS 1 Signal |
| 28 | -- | -- | Not Used |
| 29 | 0.8 L-BU | 1876 | KS 2 Signal |
| 30 | 0.8 GY | 2303 | KS 2 Signal |
| 31 | -- | -- | Not Used |
| 32 | 0.5 GY | 23 | Generator Field Duty Cycle Signal |
| 33 | -- | -- | Not Used |
| 34 | 0.5 BK | 2755 | Low Reference |
| 35 | 0.35 TN | 2752 | Low Reference |
| 36 | -- | -- | Not Used |
| 37 | 0.5 L-GN/BK | 1745 | Fuel Injector 2 Control |
| 38 | 0.5 PK/BK | 1746 | Fuel Injector 3 Control |
| 39 | 0.5 L-BU/BK | 844 | Fuel Injector 4 Control |
| 40 | 0.5 OG/BK | 877 | Fuel Injector 7 Control |
| 41 | 0.5 GY/WH | 2705 | 5-Volt Reference 1 |
| 42 | -- | -- | Not Used |
| 43 | 0.5 GY | 2704 | 5-Volt Reference 1 |
| 44 | 0.35 D-BU | 6259 | 5-Volt Reference 1 |
| 45-49 | -- | -- | Not Used |
| 50 | 0.5 TN/WH | 331 | Oil Pressure Sensor Signal |
| 51 | -- | -- | Not Used |
| 52 | 0.35 TN | 2199 | Low Reference (L76 or L9H) |
| 53 | 0.5 OG/BK | 469 | Low Reference |
| 54-55 | -- | -- | Not Used |
| 56 | 0.5 TN | 1664 | HO2S Low Signal - Bank 1 Sensor 1 |
| 57 | 0.5 PU/WH | 1665 | HO2S High Signal - Bank 1 Sensor 1 |
| 58 | 0.5 L-GN | 432 | MAP Sensor Signal |
| 59 | 0.5 PU | 1666 | HO2S High Signal - Bank 2 Sensor 1 |
| 60 | 0.5 TN | 1667 | H02S Low Signal - Bank 2 Sensor 1 |
| 61 | 0.5 BN | 25 | Charge Indicator Signal |
| 62 | -- | -- | Not Used |
| 63 | 0.35 PU | 486 | TP Sensor 2 Signal |
| 64 | 0.35 D-BU/ WH | 6265 | CMP Sensor Signal |
| 65 | 0.35 D-GN | 485 | TP Sensor 1 Signal |
| 66 | 0.35 BN | 6266 | Low Reference |
| 67 | -- | -- | Not Used |
| 68 | 0.35 WH/BK | 6271 | CKP Sensor Signal |
| 69 | 0.35 GY/BK | 6272 | Low Reference |
| 70 | 0.5 PU | 2121 | IC 1 Control |
| 71 | 0.5 PU/WH | 2128 | IC 8 Control |
| 72 | 0.5 OG | 2127 | IC 7 Control |
| 73 | 0.5 OG/WH | 2122 | IC 2 Control |
| 74 | 0.5 L-BU/WH | 2126 | IC 6 Control |
| 75 | 0.5 D-GN | 2125 | IC 5 Control |
| 76 | 0.5 D-GN/WH | 2124 | IC 4 Control |
| 77 | 0.5 L-BU | 2123 | IC 3 Control |
| 78 | 0.5 BN | 2129 | Low Reference |
| 79 | 0.5 BN/WH | 2130 | Low Reference |
| 80 | -- | -- | Not Used |

# Engine Control Module (ECM) X2 (LU3)

**Connector Part Information**




Harness: Engine

OEM: 15497996

Service: 88988372

Description: 73-Way F 0.64 2.8 Series Sealed (GY)

**Terminal Part Information**

Pins: 4, 6-13, 16, 22-24, 30-32, 35-39, 41, 43, 48-51, 58, 65-66, 68, 70-71

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: J/J

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 5, 20, 33, 44-46, 53-54, 57, 59

Terminal/Tray: 33467-0003/23

Core/Insulation Crimp: H/H

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 73

Terminal/Tray: 1326030-8/17

Core/Insulation Crimp: 4/D

Release Tool/Test Probe: 12094429/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1-3 | -- | -- | Not Used |
| 4 | 0.5 TN | 2761 | Low Reference |
| 5 | 0.35 GY/BK | 6272 | Low Reference |
| 6 | 0.5 TN | 1744 | Fuel Injector 1 Control |
| 7 | 0.5 YE/BK | 846 | Fuel Injector 6 Control |
| 8 | 0.5 TN/WH | 845 | Fuel Injector 5 Control |
| 9 | 0.5 BN | 2129 | Low Reference |
| 10 | 0.5 L-BU/BK | 844 | Fuel Injector 4 Control |
| 11 | 0.5 PK/BK | 1746 | Fuel Injector 3 Control |
| 12 | 0.5 L-GN/BK | 1745 | Fuel Injector 2 Control |
| 13 | 0.5 GY | 2704 | 5-Volt Reference 1 |
| 14-15 | -- | -- | Not Used |
| 16 | 0.5 YE | 581 | TAC Motor Control - 1 |
| 17-19 | -- | -- | Not Used |
| 20 | 0.35 BN | 6266 | Low Reference |
| 21 | -- | -- | Not Used |
| 22 | 0.5 PU | 2121 | IC 1 Control |
| 23 | 0.5 L-BU | 2123 | IC 3 Control |
| 24 | 0.5 OG/WH | 2122 | IC 2 Control |
| 25-29 | -- | -- | Not Used |
| 30 | 0.5 D-GN/WH | 428 | EVAP Canister Purge Solenoid Control |
| 31 | 0.5 BN | 25 | Charge Indicator Signal |
| 32 | 0.5 BN | 582 | TAC Motor Control - 2 |
| 33 | 0.35 D-BU | 6259 | 5-Volt Reference 1 |
| 34 | -- | -- | Not Used |
| 35 | 0.5 GY | 2705 | 5-Volt Reference 1 |
| 36 | 0.5 TN/WH | 331 | Oil Pressure Sensor Signal |

*(continued on next page)*

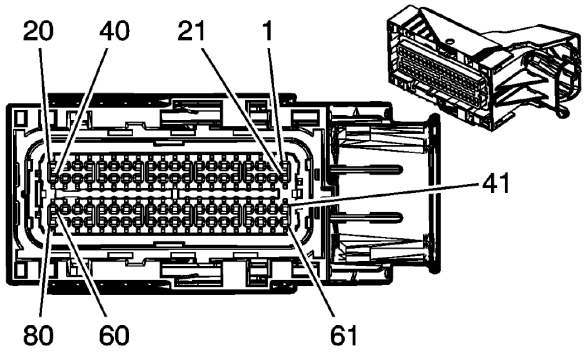
## Engine Control Module (ECM) X2 (LU3) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 37 | 0.5 PU/WH | 1665 | HO2S High Signal Bank 1 Sensor 1 |
| 38 | 0.5 PU | 1666 | HO2S High Signal Bank 2 Sensor 1 |
| 39 | 0.5 L-GN | 432 | MAP Sensor Signal |
| 40 | 0.35 TN | 2752 | Low Reference |
| 41 | 0.5 BK | 2755 | Low Reference |
| 42 | -- | -- | Not Used |
| 43 | 0.5 GY | 23 | Generator Field Duty Cycle Signal |
| 44 | -- | -- | Not Used |
| 45 | 0.35 WH/BK | 6271 | CKP Sensor Signal |
| 46 | 0.35 D-BU/ WH | 6265 | CMP Sensor Signal |
| 47 | -- | -- | Not Used |
| 48 | 0.5 TN | 1664 | HO2S Low Signal Bank 1 Sensor 1 |
| 49 | 0.5 OG/BK | 469 | Low Reference |
| 50 | 0.5 GY | 1716 | KS 1 Signal |
| 51 | 0.5 D-BU | 496 | KS 1 Signal |
| 52 | -- | -- | Not Used |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 53 | 0.35 GY | 2701 | 5-Volt Reference 2 |
| 54 | 0.35 PU/WH | 6270 | 5-Volt Reference 2 |
| 55-56 | -- | -- | Not Used |
| 57 | 0.35 D-GN | 485 | TP Sensor 1 Signal |
| 58 | 0.5 YE | 410 | ECT Sensor Signal |
| 59 | 0.35 PU | 486 | TP Sensor 2 Signal |
| 60-64 | -- | -- | Not Used |
| 65 | 0.5 GY/WH | 3113 | HO2S Heater Low Control Bank 1 Sensor 1 |
| 66 | 0.5 L-GN | 3212 | HO2S Heater Low Control Bank 2 Sensor 1 |
| 67 | -- | -- | Not Used |
| 68 | 0.5 TN | 1667 | HO2S Low Signal Bank 2 Sensor 1 |
| 69 | -- | -- | Not Used |
| 70 | 0.5 GY | 2303 | KS 2 Signal |
| 71 | 0.5 L-BU | 1876 | KS 2 Signal |
| 72 | -- | -- | Not Used |
| 73 | 3 BK/WH | 451 | Ground |

# Engine Control Module (ECM) X2 (LY2, LY6 or L9H with Y91)

**Connector Part Information**




Harness: Engine

OEM: 13536319

Service:19115670

Description: 80-Way F MX123 34566 Series (GY)

**Terminal Part Information**

Pins: 2-3, 16, 35, 41, 44, 52-53, 58, 63-66, 68-69

Terminal/Tray: 33467-0003/23

Core/Insulation Crimp: H/H

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 5-6, 8, 12-13, 17-22, 32, 34, 37-41, 43, 50, 53, 56-61, 70-79

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: J/J

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 26, 27, 29, 30

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: K/K

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU) Engine Control Module (ECM) X2 (LY6)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | -- | -- | Not Used |
| 2 | 0.35 PU/WH | 6270 | 5-Volt Reference 2 |
| 3 | 0.35 GY | 2701 | 5-Volt Reference 2 |
| 4 | -- | -- | Not Used |
| 5 | 0.5 BN | 582 | TAC Motor Control - 2 |
| 6 | 0.5 YE | 581 | TAC Motor Control - 1 |
| 7 | -- | -- | Not Used |
| 8 | 0.5 D-GN/WH | 428 | EVAP Canister Purge Solenoid Control |
| 9-11 | -- | -- | Not Used |
| 12 | 0.5 GY/WH | 3113 | HO2S Heater Low Control - Bank 1 Sensor 1 |
| 13 | 0.5 L-GN | 3212 | HO2S Heater Low Control - Bank 2 Sensor 1 |
| 14-15 | -- | -- | Not Used |
| 16 | 0.35 PU | 5284 | Camshaft Actuator Solenoid Control (LY6 or L9H) |
| 17 | 0.5 D-BU/WH | 878 | Fuel Injector 8 Control |
| 18 | 0.5 TN/WH | 845 | Fuel Injector 5 Control |
| 19 | 0.5 YE/BK | 846 | Fuel Injector 6 Control |
| 20 | 0.5 TN | 1744 | Fuel Injector 1 Control |
| 21 | 0.5 YE | 410 | ECT Sensor Signal |
| 22 | 0.5 TN | 2761 | Low Reference |
| 23-25 | -- | -- | Not Used |
| 26 | 0.8 D-BU | 496 | KS 1 Signal |
| 27 | 0.8 GY | 1716 | KS 1 Signal |
| 28 | -- | -- | Not Used |
| 29 | 0.8 L-BU | 1876 | KS 2 Signal |
| 30 | 0.8 GY | 2303 | KS 2 Signal |

*(continued on next page)*

## Engine Control Module (ECM) X2 (LY2, LY6 or L9H with Y91) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 31 | -- | -- | Not Used |
| 32 | 0.5 GY | 23 | Generator Field Duty Cycle Signal |
| 33 | -- | -- | Not Used |
| 34 | 0.5 BK | 2755 | Low Reference |
| 35 | 0.35 TN | 2752 | Low Reference |
| 36 | -- | -- | Not Used |
| 37 | 0.5 L-GN/BK | 1745 | Fuel Injector 2 Control |
| 38 | 0.5 PK/BK | 1746 | Fuel Injector 3 Control |
| 39 | 0.5 L-BU/BK | 844 | Fuel Injector 4 Control |
| 40 | 0.5 OG/BK | 877 | Fuel Injector 7 Control |
| 41 | 0.5 GY/WH | 2705 | 5-Volt Reference 1 |
| 42 | -- | -- | Not Used |
| 43 | 0.5 GY | 2704 | 5-Volt Reference 1 |
| 44 | 0.35 D-BU | 6259 | 5-Volt Reference 1 |
| 45-49 | -- | -- | Not Used |
| 50 | 0.35 TN/WH | 331 | Oil Pressure Sensor Signal |
| 51 | -- | -- | Not Used |
| 52 | 0.35 TN | 2199 | Low Reference (LY6 or L9H) |
| 53 | 0.5 OG/BK | 469 | Low Reference |
| 54-55 | -- | -- | Not Used |
| 56 | 0.5 TN | 1664 | HO2S Low Signal - Bank 1 Sensor 1 |
| 57 | 0.5 PU/WH | 1665 | HO2S High Signal - Bank 1 Sensor 1 |
| 58 | 0.5 L-GN | 432 | MAP Sensor Signal |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 59 | 0.5 PU | 1666 | HO2S High Signal - Bank 2 Sensor 1 |
| 60 | 0.5 TN | 1667 | H02S Low Signal - Bank 2 Sensor 1 |
| 61 | 0.5 BN | 25 | Charge Indicator Signal |
| 62 | -- | -- | Not Used |
| 63 | 0.35 PU | 486 | TP Sensor 2 Signal |
| 64 | 0.35 D-BU/ WH | 6265 | CMP Sensor Signal |
| 65 | 0.35 D-GN | 485 | TP Sensor 1 Signal |
| 66 | 0.35 BN | 6266 | Low Reference |
| 67 | -- | -- | Not Used |
| 68 | 0.35 WH/BK | 6271 | CKP Sensor Signal |
| 69 | 0.35 GY/BK | 6272 | Low Reference |
| 70 | 0.5 PU | 2121 | IC 1 Control |
| 71 | 0.5 PU/WH | 2128 | IC 8 Control |
| 72 | 0.5 OG | 2127 | IC 7 Control |
| 73 | 0.5 OG/WH | 2122 | IC 2 Control |
| 74 | 0.5 L-BU/WH | 2126 | IC 6 Control |
| 75 | 0.5 D-GN | 2125 | IC 5 Control |
| 76 | 0.5 D-GN/WH | 2124 | IC 4 Control |
| 77 | 0.5 L-BU | 2123 | IC 3 Control |
| 78 | 0.5 BN | 2129 | Low Reference |
| 79 | 0.5 BN/WH | 2130 | Low Reference |
| 80 | -- | -- | Not Used |

# Engine Control Module (ECM) X3 (Diesel)

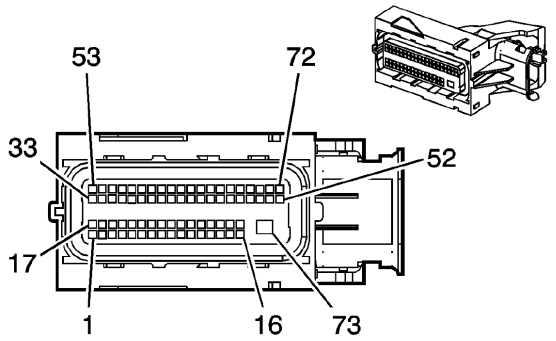
**Connector Part Information**

Harness:
Engine Chassis

OEM: 12603597

Service: 13574948

Description: 73-Way F
MX123 34566 Series (GY)




**Terminal Part Information**

Pins: 2- 4, 6-7, 9-14, 16, 18-21, 24-25, 27-32, 36-37, 40, 44, 46, 48, 54-55, 58-62, 64-68

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: J/J

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 49-52, 56-57, 69-72

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: K/K

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 73

Terminal/Tray: 7116-4152-02/9

Core/Insulation Crimp: A/5

Release Tool/Test Probe: 12094430/J-35616-35 (VT)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | -- | -- | Not Available |
| 2 | 0.5 BU/YE | 6861 | Water In Fuel Sensor Signal |
| 3 | 0.5 L-BU/WH | 1937 | Secondary Fuel Level Sensor Signal (N2N) |
| 4 | 0.5 TN/WH | 331 | Oil Pressure Sensor Signal |
| 5 | -- | -- | Not Available |
| 6 | 0.5 PU/WH | 7584 | Exhaust Gas Recirculation Temperature Sensor 1 Supply Voltage |
| 7 | 0.5 D-BU | 7583 | Exhaust Gas Recirculation Temperature Sensor 2 Supply Voltage |
| 8 | -- | -- | Not Available |
| 9 | 0.5 BN/WH | 5763 | Exhaust Gas Recirculation Valve Sensor Signal |
| 10 | 0.5 YE | 5947 | Variable Nozzle Turbo Position Sensor Signal |
| 11 | 0.5 YE | 1578 | Fuel Temperature Signal |
| 12 | 0.5 BN | 3681 | Charge Air Cooler Outlet T emperature Sensor Signal |
| 13 | 0.5 TN | 3680 | Charge Air Cooler Outlet Temperature Sensor Return |
| 14 | 0.5 TN | 2917 | 5 Volt Reference |
| 15 | -- | -- | Not Available |
| 16 | 0.5 GY | 2704 | 5 Volt Reference |
| 17 | -- | -- | Not Available |
| 18 | 0.5 D-BU | 5277 | Exhaust Gas Temperature Sensor 1 Signal |
| 19 | 0.5 D-GN | 485 | Throttle Position Sensor Signal 1 |
| 20 | 0.5 YE | 2918 | Fuel Rail Pressure Sensor Signal |
| 21 | 0.5 L-GN | 432 | Manifold Absolute Pressure Sensor Signal |
| 22-23 | -- | -- | Not Available |
| 24 | 0.5 YE | 410 | Engine Coolant Temperature Sensor Signal |
| 25 | 0.5 D-GN/WH | 3654 | EGR Cooler Bypass Position Sensor Signal (LML) |
| 26 | -- | -- | Not Available |

*(continued on next page)*

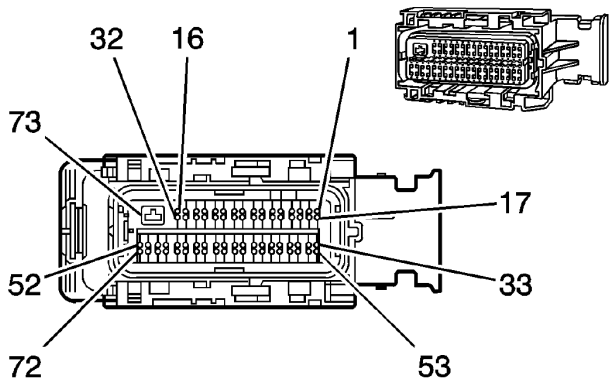
## Engine Control Module (ECM) X3 (Diesel) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 27 | 0.5 BN/GY | 7072 | Sensor Fuel Temperature 1 Signal |
| 28 | 0.5 D-GN | 3683 | Charge Air Cooler Inlet Temperature Sensor Signal |
| 29 | 0.5 TN/BK | 3682 | Charge Air Cooler Inlet Temperature Sensor Return |
| 30 | 0.5 GY | 2705 | 5 Volt Reference |
| 31 | 0.5 D-BU | 6259 | 5 Volt Reference |
| 32 | 0.5 GY | 2701 | 5 Volt Reference |
| 33-35 | -- | -- | Not Available |
| 36 | 0.5 OG/BK | 2919 | Low Reference |
| 37 | 0.5 OG/BK | 469 | Low Reference |
| 38-39 | -- | -- | Not Available |
| 40 | 0.5 TN | 2761 | Low Reference |
| 41-43 | -- | -- | Not Available |
| 44 | 0.5 GY/BK | 5765 | Fuel Filter Pressure Switch Signal |
| 45 | -- | -- | Not Available |
| 46 | 0.5 BN/WH | 7073 | Sensor Fuel Temperature 1 Return |
| 47 | -- | -- | Not Available |
| 48 | 0.5 BN | 6062 | Low Reference |
| 49 | 0.8 GY/WH | 4908 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 8 |
| 50 | 0.8 D-BU/WH | 4902 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 2 |
| 51 | 0.8 D-BU | 4802 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 2 |
| 52 | 0.8 L-BU | 4805 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 5 |
| 53 | -- | -- | Not Available |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 54 | 0.5 L-GN/BK | 5746 | Exhaust Gas Recirculation Valve Motor Low Signal |
| 55 | 0.5 OG/BK | 5764 | Exhaust Gas Recirculation Valve Motor High Signal |
| 56 | 0.8 BN | 582 | Throttle Actuator Control Close |
| 57 | 0.8 YE | 581 | Throttle Actuator Control Open |
| 58 | 0.5 OG/BK | 3656 | EGR Cooler Bypass Motor Close Control (LML) |
| 59 | 0.5 L-GN | 3655 | EGR Cooler Bypass Motor Open Control (LML) |
| 60 | 0.5 GY/BK | 6272 | Low Reference |
| 61 | 0.5 WH/BK | 6271 | CKP Sensor Signal |
| 62 | 0.5 D-GN | 485 | Throttle Position Sensor Signal 1 |
| 63 | -- | -- | Not Available |
| 64 | 0.5 D-GN/WH | 6142 | Power Take Off Engine Shutdown Signal (PTO) |
| 65 | 0.5 D-BU/WH | 6265 | CMP Sensor Signal |
| 66 | 0.5 BN | 6266 | Low Reference |
| 67 | 0.5 BN | 6274 | Low Reference |
| 68 | 0.5 WH | 6275 | Low Reference |
| 69 | 0.8 D-GN/WH | 4903 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 3 |
| 70 | 0.8 L-GN/WH | 4905 | Direct Fuel Injector (DFI) High Voltage Supply Cylinder 5 |
| 71 | 0.8 D-GN | 4803 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 3 |
| 72 | 0.8 GY | 4808 | Direct Fuel Injector (DFI) High Voltage Control Cylinder 8 |
| 73 | 3 BK/WH | 451 | Ground |

# Engine Control Module (ECM) X3 (HP2)

**Connector Part Information**




Harness: Engine

OEM: 15497996

Service: 88988372

Description: 73-Way F 0.64 2.8 Series, Sealed (GY Encased in BK)

**Terminal Part Information**

Pins: 73

Terminal/Tray: 7116-4152-02/9

Core/Insulation Crimp: A/5

Release Tool/Test Probe: 12094430/J-35616-35 (VT)

Pins: 10, 11, 21, 37, 49, 57, 66, 68, 69

Terminal/Tray: 33467-0003/23

Core/Insulation Crimp: H/H

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 3-8, 14, 15, 22-36, 38, 39, 47, 48, 50-56, 58, 59, 66, 67, 70-72

Terminal/Tray: 33467-0005/23

Core/Insulation Crimp: Pins 3-18, 23, 33-36, 39-56, 59-72 - J/J

Core/Insulation Crimp: Pins 22, 38, 58 - K/K

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1-2 | -- | -- | Not Used |
| 3 | 0.5 TN | 1667 | HO2S Low Signal - Bank 2 Sensor 1 |
| 4 | 0.5 PU | 1666 | HO2S High Signal - Bank 2 Sensor 1 |
| 5 | 0.5 PU | 1670 | HO2S High Signal - Bank 2 Sensor 2 |
| 6 | 0.5 TN | 1671 | HO2S Low Signal - Bank 2 Sensor 2 |
| 7 | -- | -- | Not Used |
| 8 | 0.5 D-BU | 941 | Low Temperature Cooling Pump Motor Ground |
| 9 | -- | -- | Not Used |
| 10 | 0.35 GY | 5493 | Valve Lifter Oil Manifold (VLOM) Assembly Cylinder 6 Shutoff Solenoid |
| 11 | 0.35 D-BU | 5491 | Valve Lifter Oil Manifold (VLOM) Assembly Cylinder 1 Shutoff Solenoid |
| 12-14 | -- | -- | Not Used |
| 15 | 0.5 L-GN | 3212 | HO2S Heater Low Control - Bank 2 Sensor 1 |
| 16-20 | -- | -- | Not Used |
| 21 | 0.35 TN | 5514 | Low Reference |
| 22 | 0.5 OG/BK | 469 | Low Reference |
| 23 | 0.5 OG/BK | 469 | Low Reference |
| 24-32 | -- | -- | Not Used |
| 33 | 0.5 L-BU | 6106 | PTLAN - |
| 34 | -- | -- | Not Used |
| 35 | 0.5 TN | 2761 | Low Reference |
| 36 | 0.5 TN | 955 | Low Reference |

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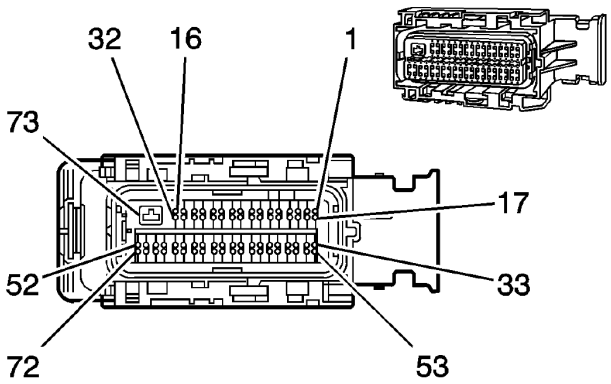
## Engine Control Module (ECM) X3 (HP2) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 37 | 0.35 GY | 2700 | 5-Volt Reference 1 |
| 38 | 0.5 GY | 2704 | 5-Volt Reference |
| 39 | 0.5 GY | 2704 | 5-Volt Reference 1 |
| 40-46 | -- | -- | Not Used |
| 47 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 48 | 0.5 D-GN/WH | 428 | EVAP Canister Purge Solenoid Control |
| 49 | 0.35 D-BU | 473 | Low Speed Cooling Fan Relay Control |
| 50 | 0.5 OG/WH | 3223 | HO2S Heater Low Control - Bank 2 Sensor 2 |
| 51 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 52 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 53 | 0.5 D-BU | 6105 | PTLAN + |
| 54 | -- | -- | Not Used |
| 55 | 0.5 YE | 410 | Engine Coolant Temperature (ECT) Sensor Signal |
| 56 | 0.5 YE | 954 | 5-Volt Reference |
| 57 | 0.35 OG/BK | 380 | A/C Refrigerant Pressure Sensor Signal |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 58 | 0.5 L-GN | 432 | Barometric Pressure Sensor Signal |
| 59 | 0.5 L-GN | 432 | Manifold Absolute Pressure (MAP) Sensor Signal |
| 60-65 | -- | -- | Not Used |
| 66 | 0.35 OG/BK | 6399 | Vehicle Speed Signal (except NQH) |
| | 0.5 PU/WH | 821 | Vehicle Speed Sensor (VSS) High Signal (NQH) |
| 67 | 0.5 L-GN/BK | 822 | Vehicle Speed Sensor (VSS) Low Signal (NQH) |
| 68 | 0.35 L-GN | 5492 | Valve Lifter Oil Manifold (VLOM) Assembly Cylinder 7 Shutoff Solenoid |
| 69 | 0.35 OG | 5494 | Valve Lifter Oil Manifold (VLOM) Assembly Cylinder 4 Shutoff Solenoid |
| 70 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 71 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 72 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 73 | 3 BK/WH | 451 | Ground |

# Engine Control Module (ECM) X3 (L96)

**Connector Part Information**




Harness: Engine

OEM: 15497996

Service: 88988372

Description: 73-Way F 64/2.8 Series, Sealed (BK)

**Terminal Part Information**

Pins: 27, 43-44, 55, 63-64

Terminal/Tray: 33467-0003/23

Core/Insulation Crimp: H/H

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

Pins: 10, 16-17, 28-30, 32, 45-46, 48-49, 65-68

Terminal/Tray: 33467-0005/23

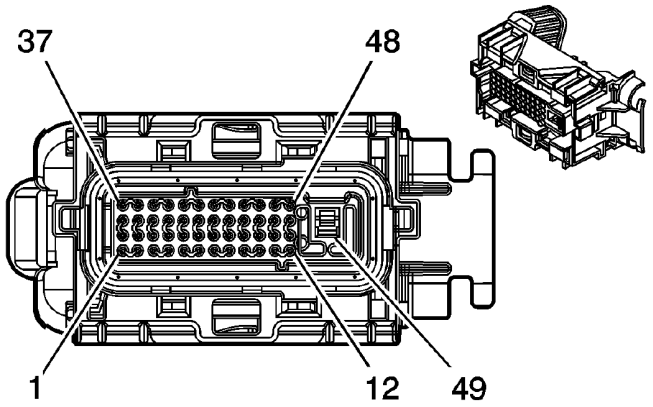
Core/Insulation Crimp: J/J

Release Tool/Test Probe: J-38125-213/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1-9 | -- | -- | Not Available |
| 10 | 0.5 D-GN/WH | 428 | EVAP Canister Purge Solenoid Control |
| 11-15 | -- | -- | Not Available |
| 16 | 0.5 OG/WH | 3223 | HO2S Heater Low Control Bank 2 Sensor 2 |
| 17 | 0.5 GY | 23 | Generator Field Duty Cycle Signal |
| 18-26 | -- | -- | Not Available |
| 27 | 0.35 TN/BK | 6049 | Low Reference |
| 28 | 0.5 GY | 2704 | 5-Volt Reference 1 |
| 29 | 0.5 OG/BK | 469 | Low Reference |
| 30 | 0.5 TN | 2761 | Low Reference |
| 31 | -- | -- | Not Available |
| 32 | 0.5 GY/WH | 3122 | HO2S Heater Low Control Bank 2 Sensor 1 |
| 33-42 | -- | -- | Not Available |
| 43 | 0.35 GY | 2709 | 5-Volt Reference 1 |
| 44 | 0.5 YE | 410 | ECT Sensor Signal |
| 45 | 0.5 L-GN | 432 | MAP Sensor Signal |
| 47 | -- | -- | Not Available |
| 48 | 0.5 PU/WH | 821 | VSS High Signal (MYD with NQF or NQG) |
| 49 | 0.5 L-GN/BK | 822 | VSS Low Signal (MYD with NQF or NQG) |
| 50-54 | -- | -- | Not Available |
| 55 | 0.35 OG/BK | 6399 | Replicated TOS Signal (except NQF or NQG) |
| 56-62 | -- | -- | Not Available |
| 63 | 0.35 D-GN | 890 | Fuel Tank Pressure Sensor Signal |
| 64 | 0.35 PU | 1589 | Fuel Level Sensor Signal - Primary |
| 65 | 0.5 PU | 1670 | HO2S High Signal Bank 2 Sensor 2 |
| 66 | 0.5 TN | 1671 | HO2S Low Signal Bank 2 Sensor 2 |
| 67 | 0.5 PU/WH | 1668 | HO2S High Signal Bank 1 Sensor 2 |
| 68 | 0.5 TN/WH | 1669 | HO2S Low Signal Bank 1 Sensor 2 |
| 69-73 | -- | -- | Not Available |

# Transmission Control Module (TCM) (M30)

**Connector Part Information**




Harness: Engine

OEM: 15463921

Service: 88987979

Description: 49-Way F GT 280 Micro-Pack 64 Series Sealed (BK)

**Terminal Part Information**

Pins: 1-3, 5-7,11, 14, 16-17, 20, 23,25, 29-32, 35, 37-42, 45,46

Terminal/Tray: 15359541/4

Core/Insulation Crimp: M/M

Release Tool/Test Probe: 15381651-2/J-35616-64B (L-BU)

Pin: 49

Terminal/Tray: 19491972/24

Core/Insulation Crimp: E/5

Release Tool/Test Probe: 15315247/J-35616-4A (PU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.5 BN | 418 | TCC PWM Solenoid Valve Control |
| 2 | 0.5 L-GN | 1222 | Shift Solenoid 1 Valve Control |
| 3 | 0.35 OG | 1983 | Transmission Turbine Speed Signal |
| 4 | -- | -- | Not Used |
| 5 | 0.5 OG/BK | 6399 | Replicated TOS Signal |
| 6 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 7 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 8-10 | -- | -- | Not Used |
| 11 | 0.35 D-BU | 5985 | Accessory Wakeup serial Data |
| 12-14 | -- | -- | Not Used |
| 15 | -- | -- | Not Used |
| 16 | 0.5 L-GN/BK | 822 | VSS Low Signal |
| 17 | 0.5 L-BU/WH | 1229 | PC Solenoid Valve Low Control (Solenoid A) |
| 18-19 | -- | -- | Not Used |
| 20 | 0.5 YE | 1223 | Shift Solenoid 2 Valve Control |
| 21-22 | -- | -- | Not Used |
| 23 | 0.35 GY | 773 | Transmission Range Switch Signal A |
| 24 | -- | -- | Not Used |
| 25 | 0.5 TN/BK | 422 | TCC Solenoid Valve Control |
| 26-28 | -- | -- | Not Used |

*(continued on next page)*

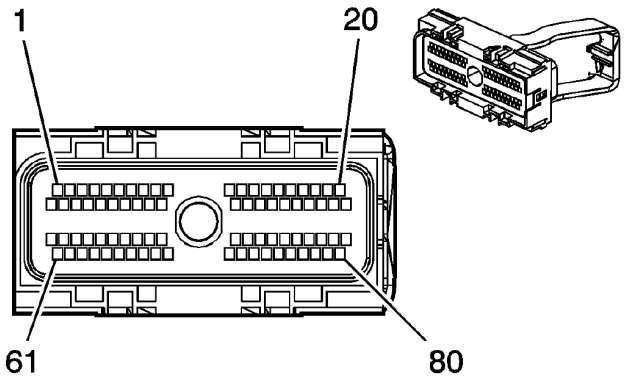
## Transmission Control Module (TCM) (M30) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 29 | 0.35 TN/WH | 771 | Transmission Range Switch Signal A |
| 30 | 0.35 TN | 2762 | Low Reference |
| 31 | 0.5 PK/WH | 2139 | Ignition 1 Voltage |
| 32 | 0.5 RD/WH | 1840 | Battery Positive Voltage |
| 33-34 | -- | -- | Not Used |
| 35 | 0.35 YE/BK | 1227 | TFT Sensor Signal |
| 36 | -- | -- | Not Used |
| 37 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 38 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (-) |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 39 | 0.35 WH | 776 | Transmission Range Switch Signal P |
| 40 | 0.5 OG/BK | 1228 | PC Solenoid Valve High Control |
| 41 | 0.5 PU/WH | 821 | VSS High Signal |
| 42-44 | -- | -- | Not Used |
| 45 | 0.35 L-BU | 1984 | Transmission Turbine Speed Switch Low Reference |
| 46 | 0.35 YE | 772 | Transmission Range Switch Signal B |
| 47-48 | -- | -- | Not Used |
| 49 | 0.8 BK/WH | 451 | Ground |

# Transmission Control Module (TCM) (MW7)

**Connector Part Information**




Harness:
Engine Chassis

OEM: 13551663

Service: 88988934

Description: 80-Way F (BK)

**Terminal Part Information**

Pins: 2, 6, 10-11, 20, 25, 27, 33, 36, 40, 47, 51-52, 55, 60, 63, 66, 70, 71, 74, 78, 80

Terminal/Tray: 33001-3004/23

Core/Insulation Crimp: E/2

Release Tool/Test Probe: J-38125-217/J-35616-14 (GN)

Pins: 9, 69

Terminal/Tray: 3001-3004/23

Core/Insulation Crimp: A/E/A/C

Release Tool/Test Probe: J-38125-217/J-35616-14 (GN)

Pins: 14, 17, 34, 43, 53, 54, 57, 58, 73, 77, 79

Terminal/Tray: See Terminal Repair Kit

Core/Insulation Crimp: See Terminal Repair Kit

Release Tool/Test Probe: See Terminal Repair Kit

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | -- | -- | Not Used |
| 2 | 0.5 PK/WH | 2139 | Ignition 1 Voltage (CMD) |
| 3-5 | -- | -- | Not Used |
| 6 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 7-8 | -- | -- | Not Used |
| 9 | 0.8 BK/WH | 451 | Ground |
| 10 | 0.5 RD/WH | 1840 | Battery Positive Voltage |
| 11 | 0.5 OG/BK | 1228 | PC Solenoid Valve High Control |
| 12-13 | -- | -- | Not Used |
| 14 | 0.35 GY | 773 | Transmission Range Switch Signal C |
| 15-16 | -- | -- | Not Used |
| 17 | 0.35 PK | 1224 | Transmission Fluid Pressure Switch Signal A |
| 18-19 | -- | -- | Not Used |
| 20 | 0.5 L-BU | 1984 | Transmission Turbine Speed Switch Low Reference |
| 21-24 | -- | -- | Not Used |
| 25 | 0.5 OG/BK | 6399 | Replicated TOS Signal |
| 26 | -- | -- | Not Used |
| 27 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 28-32 | -- | -- | Not Used |
| 33 | 0.5 YE/RD | 1223 | Shift Solenoid 2 Valve Control |
| 34 | 0.35 WH | 776 | Transmission Range Switch Signal P |
| 35 | -- | -- | Not Used |
| 36 | 0.5 BN/WH | 2469 | PC Solenoid Valve Low Control |

*(continued on next page)*

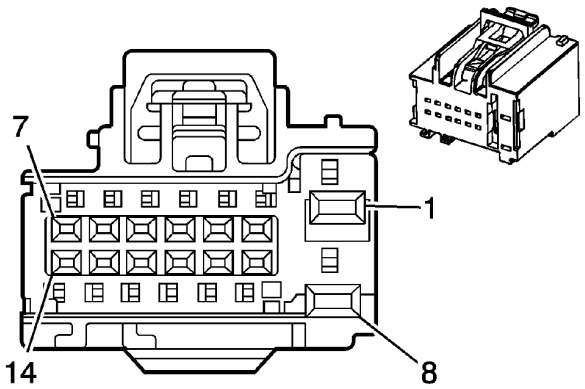
## Transmission Control Module (TCM) (MW7) (cont'd)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 37-39 | -- | -- | Not Used |
| 40 | 0.5 L-GN/BK | 822 | VSS Low Signal |
| 41-42 | -- | -- | Not Used |
| 43 | 0.35 D-BU | 5985 | Accessory Wakeup Serial Data |
| 44-46 | -- | -- | Not Used |
| 47 | 0.5 TN | 2501 | High Speed GMLAN Serial Data Bus (-) |
| 48-50 | -- | -- | Not Used |
| 51 | 0.5 OG/WH | 2527 | Shift Solenoid C Valve Control |
| 52 | 0.5 L-GN | 1222 | Shift Solenoid 1 Valve Control |
| 53 | 0.35 YE | 772 | Transmission Range Switch Signal B |
| 54 | 0.35 YE/BK | 1227 | TFT Sensor Signal |
| 55 | 0.5 L-BU/WH | 1229 | PC Solenoid Valve Low Control |
| 56 | -- | -- | Not Used |
| 57 | 0.35 OG | 1226 | Transmission Fluid Pressure Switch Signal C |
| 58 | 0.35 TN | 2762 | Low Reference |
| 59 | -- | -- | Not Used |
| 60 | 0.5 PU/WH | 821 | VSS High Signal |
| 61-62 | -- | -- | Not Used |

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 63 | 0.5 PK/WH | 2139 | Ignition 1 Voltage |
| 64-65 | -- | -- | Not Used |
| 66 | 0.5 TN/BK | 2500 | High Speed GMLAN Serial Data Bus (+) |
| 67-68 | -- | -- | Not Used |
| 69 | 0.8 BK/WH | 451 | Ground |
| 70 | 0.5 RD/WH | 1840 | Battery Positive Voltage |
| 71 | 0.5 BN | 323 | Actuator Supply Voltage |
| 72 | -- | -- | Not Used |
| 73 | 0.35 TN/WH | 771 | Transmission Range Switch Signal A |
| 74 | 0.5 D-BU | 1530 | Transmission Mainline Pressure Solenoid Control |
| 75-76 | -- | -- | Not Used |
| 77 | 0.35 L-GN/BK | 2529 | Fluid Pressure Switch Signal 4 |
| 78 | 0.5 BN | 418 | TCC PWM Solenoid Valve Control |
| 79 | 0.35 D-BU | 1225 | Transmission Fluid Pressure Switch Signal B |
| 80 | 0.5 OG | 1983 | Transmission Turbine Speed Switch Signal |

# Radio X1 (except Y91)

**Connector Part Information**




Harness:
I/P Extension

OEM: 13601512

Service: 88988743

Description: 14-Way F 0.64 1.5 Series (BK)

**Terminal Part Information**

Pins: 1, 8

Terminal/Tray: 12191812/19

Core/Insulation Crimp: C/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: 2-7, 9-11, 13

Terminal/Tray: SAIT-A03T-M064/14

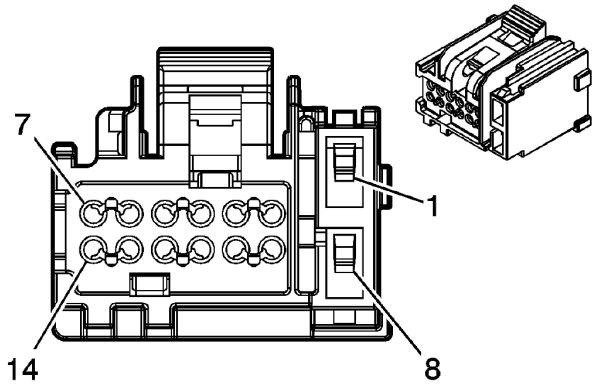
Core/Insulation Crimp: P/P

Release Tool/Test Probe: J-38125-215A/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 1 RD/WH | 340 | Battery Positive Voltage |
| 2 | 0.35 TN | 511 | Left Front Low Level Audio Signal (+) (UQA) |
| | 0.5 TN | 201 | Left Front Speaker Output (+) (UQ3 or UQ5) |
| 3 | 0.35 L-GN/WH | 512 | Right Front Low Level Audio Signal (+) (UQA) |
| | 0.5 L-GN | 200 | Right Front Speaker Output (+) (UQ3 or UQ5) |
| 4 | 0.35 PK | 5149 | Voice Recognition Audio Signal (UUL or UUK with UE1) |
| | 0.35 GY | 655 | Cellular Telephone Voice Signal (UUL or UUK without UE1) |
| 5 | 0.35 PK/BK | 5152 | Low Reference (UUL or UUK with UE1) |
| | 0.5 BARE | 514 | Drain Wire (UUL or UUK without UE1 and without Y91) |
| | 0.35 BARE | 514 | Drain Wire (UUL or UUK without UE1 and with Y91) |
| 6 | 0.35 WH | 7066 | Entertainment Remote Enable Signal (UQA) |
| 7 | 0.35 YE | 6817 | LED Backlight Dimming Control |
| 8 | 1 BK | 2550 | Ground |
| 9 | 0.35 D-GN | 1947 | Left Front Low Level Audio Signal (-) (UQA) |
| | 0.5 GY | 118 | Left Front Speaker Output (-) (UQ3 or UQ5) |
| 10 | 0.35 OG/BK | 1546 | Right Front Low Level Audio Signal (-) (UQA) |
| | 0.5 D-GN | 117 | Right Front Speaker Output (-) (UQ3 or UQ5) |
| 11 | 0.5 BARE | 2011 | Drain Wire (UQA without Y91) |
| | 0.35 BARE | 2011 | Drain Wire (UQA with Y91) |
| 12 | -- | -- | Not Used |
| 13 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data |
| 14 | -- | -- | Not Used |

# Radio X1 (Y91 or 8S8)

**Connector Part Information**




Harness:
Instrument Panel

OEM: 13545829

Service: 13504953

Description: 14-Way F GT 150 Micro 64 Series (BK)

**Terminal Part Information**

Pins: 1, 8

Terminal/Tray: 12191812/19

Core/Insulation Crimp: C/A

Release Tool/Test Probe: 15315247/J-35616-2A (GY)

Pins: 2-7, 9-11, 13

Terminal/Tray: 15359541/4

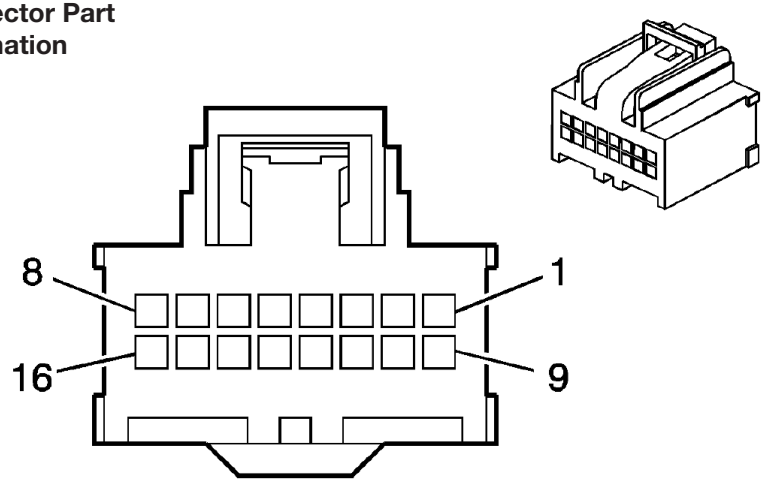
Core/Insulation Crimp: M/M

Release Tool/Test Probe: 15381651-2/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 1 RD/WH | 340 | Battery Positive Voltage |
| 2 | 0.35 TN | 511 | Left Front Low Level Audio Signal (+) (UQA) |
| | 0.5 TN | 201 | Left Front Speaker Output (+) (UQ3 or UQ5) |
| 3 | 0.35 L-GN/WH | 512 | Right Front Low Level Audio Signal (+) (UQA) |
| | 0.5 L-GN | 200 | Right Front Speaker Output (+) (UQ3 or UQ5) |
| 4 | 0.35 PK | 5149 | Voice Recognition Audio Signal (UUL or UUK with UE1) |
| | 0.35 GY | 655 | Cellular Telephone Voice Signal (UUL or UUK without UE1) |
| 5 | 0.35 PK/BK | 5152 | Low Reference (UUL or UUK with UE1) |
| | 0.35 BARE | 514 | Drain Wire (UUL or UUK without UE1) |
| 6 | 0.35 WH | 7066 | Entertainment Remote Enable Signal (U42) |
| 7 | 0.35 YE | 6817 | LED Backlight Dimming Control |
| 8 | 1 BK | 2550 | Ground |
| 9 | 0.35 D-GN | 1947 | Left Front Low Level Audio Signal (-) (UQA) |
| | 0.5 GY | 118 | Left Front Speaker Output (-) (UQ3 or UQ5) |
| 10 | 0.35 OG/BK | 1546 | Right Front Low Level Audio Signal (-) (UQA) |
| | 0.5 D-GN | 117 | Right Front Speaker Output (-) (UQ3 or UQ5) |
| 11 | 0.35 BARE | 2011 | Drain Wire (Y91) |
| 12 | -- | -- | Not Used |
| 13 | 0.35 D-GN | 5060 | Low Speed GMLAN Serial Data |
| 14 | -- | -- | Not Used |

# Radio X2 (except Y91 or 8S8)

**Connector Part Information**




Harness: I/P Extension

OEM: 13676739

Service: 15136073

Description: 16-Way F Kaizen 0.64 Series (YE)

**Terminal Part Information**

Terminal/Tray: SAIT-A03T-M064/14

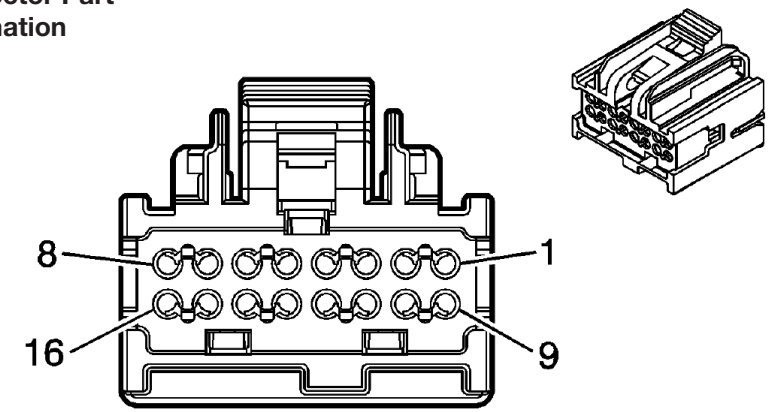
Core/Insulation Crimp: P/P

Release Tool/Test Probe: J-38125-215A/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.35 BN/WH | 367 | Left Audio Signal (+) (U2K) |
| 2 | 0.35 D-GN/WH | 368 | Right Audio Signal (+) (U2K) |
| 3 | 0.5 BARE | 2099 | Drain Wire (UQA) |
| 4 | -- | -- | Not Used |
| 5 | 0.5 BN | 199 | Left Rear Speaker Output (+) (UQ3 or UQ5) |
| | 0.35 BN/WH | 599 | Left Rear Low Level Audio Signal (+) (UQA) |
| 6 | 0.35 D-BU | 546 | Right Rear Low Level Audio Signal (+) (UQA) |
| | 0.5 D-BU | 46 | Right Rear Speaker Output (+) (UQ3 or UQ5) |
| 7 | 0.35 D-BU | 658 | Cellular Telephone Voice Signal (UE1) |
| 8 | 0.35 OG | 6978 | Amplifier Control (UQA) |
| 9 | 0.35 TN/WH | 372 | Left Radio Audio Output (-) (U2K) |
| 10 | 0.35 GY | 388 | Remote Radio Right Audio Signal (U2K) |
| 11 | 0.35 BARE | 1573 | Drain Wire (U2K) |
| 12 | -- | -- | Not Used |
| 13 | 0.35 YE | 116 | Left Rear Low Level Audio Signal (-) (UQ3 or UQ5) |
| | 0.35 BN | 1999 | Left Rear Low Level Audio Signal (-) (UQA) |
| 14 | 0.5 L-BU | 115 | Right Rear Low Level Audio Signal (-) (UQ3 or UQ5) |
| | 0.35 TN | 1946 | Right Rear Low Level Audio Signal (-) (UQA) |
| 15 | 0.35 L-BU/BK | 659 | Low Reference (UE1) |
| 16 | -- | -- | Not Used |

# Radio X2 (Y91 or 8S8)

**Connector Part Information**




Harness: Instrument Panel

OEM: 13568238

Service: 13504130

Description: 16-Way F Micro 64 Series Sealed (BK)

**Terminal Part Information**

Terminal/Tray: 15359541/4

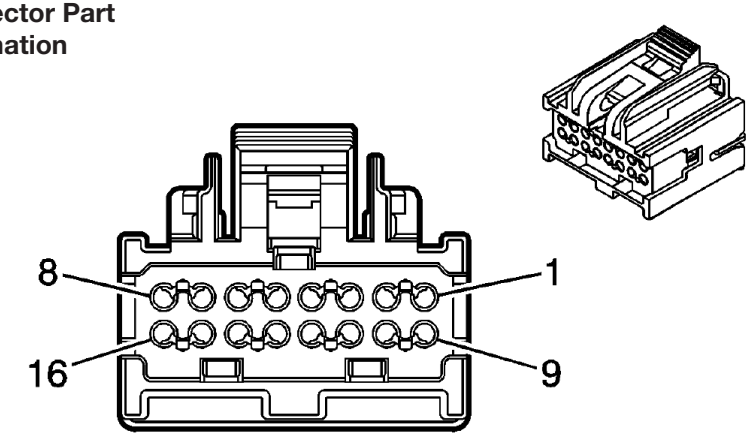
Core/Insulation Crimp: M/M

Release Tool/Test Probe: 15381651-2/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.35 BN/WH | 367 | Left Audio Signal (+) (U2K) |
| 2 | 0.35 D-GN/WH | 368 | Right Audio Signal (+) (U2K) |
| 3-4 | -- | -- | Not Used |
| 5 | 0.5 BN | 199 | Left Rear Speaker Output (+) (UQ3 or UQ5) |
| | 0.35 BN/WH | 599 | Left Rear Low Level Audio Signal (+) (UQA) |
| 6 | 0.35 D-BU | 546 | Right Rear Low Level Audio Signal (+) (UQA) |
| | 0.5 D-BU | 46 | Right Rear Speaker Output (+) (UQ3 or UQ5) |
| 7 | 0.35 D-BU | 658 | Cellular Telephone Voice Signal (UE1) |
| 8 | -- | -- | Not Used |
| 9 | 0.35 TN/WH | 372 | Left Radio Audio Output (-) (U2K) |
| 10 | 0.35 GY | 388 | Remote Radio Right Audio Signal (U2K) |
| 11 | 0.35 BARE | 1573 | Drain Wire (U2K) |
| 12 | -- | -- | Not Used |
| 13 | 0.35 YE | 116 | Left Rear Low Level Audio Signal (-) (UQ3 or UQ5) |
| | 0.35 BN | 1999 | Left Rear Low Level Audio Signal (-) (UQA) |
| 14 | 0.5 L-BU | 115 | Right Rear Low Level Audio Signal (-) (UQ3 or UQ5) |
| | 0.35 TN | 1946 | Right Rear Low Level Audio Signal (-) (UQA) |
| 15 | 0.35 L-BU/BK | 659 | Low Reference (UE1) |
| 16 | -- | -- | Not Used |

# Radio X3 (U42)

**Connector Part Information**




Harness: Instrument Panel

OEM: 13568239

Service:13504589

Description: 16-Way F Micro 64 Series Sealed (GY)

**Terminal Part Information**

Terminal/Tray: 15359541/4

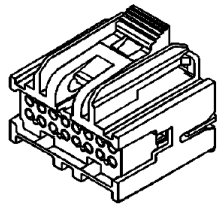
Core/Insulation Crimp: M/M

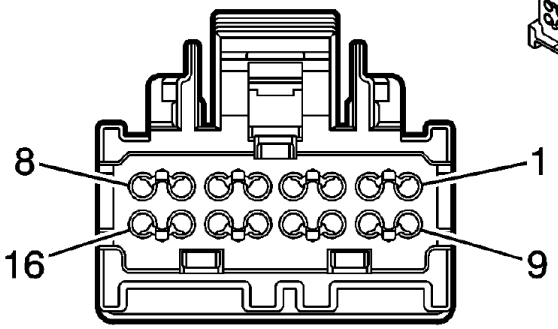
Release Tool/Test Probe: 15381651-2/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1 | 0.35 YE | 2059 | Auxiliary Audio Left Signal |
| 2 | 0.35 WH | 2058 | Auxiliary Audio Right Signal |
| 3 | 0.35 L-BU | 5826 | Left DVD Audio Signal (+) |
| 4 | 0.35 WH | 5828 | Right DVD Audio Signal (+) |
| 5 | 0.35 OG/BK | 5831 | Remote Infra Red Signal (+) |
| 6 | 0.35 PK/BK | 5844 | Video Bright Control |
| 7 | 0.35 D-GN | 6975 | DVD Video Signal (+) |
| 8 | 0.35 PU | 2056 | Auxiliary Video High Signal |
| 9 | 0.5 BARE | 5345 | Drain Wire (except Y91) |
| | 0.35 BARE | 5345 | Drain Wire (Y91) |
| 10 | 0.35 L-GN/BK | 5845 | Video Mode Signal |
| 11 | 0.35 PU | 6979 | DVD Audio Common |
| 12 | 0.35 BARE | 6980 | DVD Audio Shield (Y91) |
| | 0.5 BARE | 6980 | DVD Audio Shield (except Y91) |
| 13 | 0.35 TN/WH | 5830 | Remote Infra Red Signal (-) |
| 14 | 0.35 BARE | 6976 | Drain Wire (Y91) |
| | 0.5 BARE | 6976 | Drain Wire (except Y91) |
| 15 | 0.35 WH/BK | 5335 | DVD Video Signal (-) |
| 16 | 0.5 BARE | 5346 | Drain Wire (except Y91) |
| | 0.35 BARE | 5346 | Drain Wire (Y91) |

## Radio X4 (UUL or UUK)

**Connector Part Information**






Harness: I/P Extension

OEM: 13568240

Service: 13504590

Description: 16-Way F Micro 64 Series Sealed (BN)

**Terminal Part Information**

Terminal/Tray: 15359541/4

Core/Insulation Crimp: M/M

Release Tool/Test Probe: 15381651-2/J-35616-64B (L-BU)

| Pin | Wire Color | Circuit No. | Function |
|---|---|---|---|
| 1-4 | -- | -- | Not Used |
| 5 | 0.8 D-GN/WH | 817 | Vehicle Speed Signal (except Y91) |
| | 0.5 D-GN/WH | 817 | Vehicle Speed Signal (Y91) |
| 6 | 0.35 GY/D-BU | 7641 | Camera Video Signal (+) (SPO Rearview Camera) |
| | 0.35 WH | 7641 | Camera Video Signal (+) (UVC) |
| 7 | 0.35 GY/OG | 7642 | Camera Video Signal (-) (SPO Rearview Camera) |
| | 0.35 L-BU | 7642 | Camera Video Signal (-) (UVC) |
| 8 | 0.35 PU | 5837 | Amplifier Audio Prompt Signal (+) (Y91) |
| 9-14 | -- | -- | Not Used |
| 15 | 0.35 BARE | 5838 | Amplifier Audio Prompt Drain Wire (Y91) |
| 16 | 0.35 GY | 5836 | Amplifier Audio Prompt Signal (-) (Y91) |